

ARCHAEOLOGY



Summer 1953

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ARCHAEOLOGY

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VOLUME 6, NUMBER 2

June, 1953

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HEADS

BY ATHENIAN ARTISTS

THE FIVE HEADS ON THESE PAGES are photographically enlarged from vases made and decorated in Athens during the fifth century B.C.—more specifically, in the period between the first of the Persian Wars and the opening years of the great Peloponnesian War. They are in the red-figured and the white-ground techniques. Artists were just beginning to realize the possibilities of drawing with a free flowing line and their joyous, expansive outburst of production is a pleasure to behold. The five samples are here arranged in chronological order so that one may observe the rapid progress toward accuracy of representation. Perhaps more interesting than this progress is the individuality of styles of these artists, leading to their being dubbed with modern names. These modern names have only modern associations, but they must suffice until real names are by some miracle discovered.

All five vases are in the Walters Art Gallery, Baltimore. These photographs were incorporated in the exhibition, *Miniature Faces in Greek and Roman Art*, which was announced in *ARCHAEOLOGY* 5 (1952) 29.

—DOROTHY KENT HILL



Head of discus-thrower, by the Berlin Painter (on the cover). 490-480 B.C.



Head of girl, by unknown artist. 470-460 B.C.



Head of a maenad, by the Sotheby Painter. About 460 B.C.



Head of mourner, by the Thanatos Painter. 440-430 B.C.



Head of the girl Paidia, by the Eretria Painter. About 425 B.C.

SIR JOHN SOANE,

His Classical Antiquities

By Cornelius C. Vermeule

Originally from New Jersey, Mr. Vermeule attended Harvard University, where he majored in Far Eastern languages and graduated (A.B., 1949) after war service in Japan and the Philippines. Turning then to classical archaeology, he continued his studies at Harvard. Since receiving the M.A. degree there (1951), he has been studying on a Fulbright fellowship at University College, London, and is working on a catalogue of the classical antiquities in the Soane Museum.

SIR JOHN SOANE (1753-1837), ARCHITECT OF the Bank of England and other landmarks of early nineteenth-century London, is studied for his highly personal interpretation of the neoclassical style. He is also remembered for the museum which he founded, endowed and bequeathed to the nation. This museum is well known for its collection of architectural drawings by masters from the High Renaissance to ROBERT ADAM, for its two series of paintings by HOGARTH and for its varied assortment of other objects, some of great importance, many of little worth. The latter include Renaissance bronzes, Royal Academy paintings, relics of NAPOLEON and "natural curiosities." Besides Egyptian antiquities, the most noteworthy of which is the celebrated Belzoni sarcophagus of Seti I, Sir JOHN SOANE also collected a number of Greek and Roman marbles, bronzes, vases, terra cottas and gems with which, in addition to numerous casts, he enriched the museum. In the private Act of Parli-



The museum arrangement in 1813

A romanticized view of the interior of the Dome, looking up from the Sepulchral Chamber. This watercolor by J. M. GANDY is now in the museum. This area was considerably rearranged prior to SOANE's death, and the sarcophagus of Seti I now fills the empty floor space in the center. Casts, antique fragments, urns and statuary are displayed in a manner recalling the eighteenth-century Italian engravings of G. B. PIRANESI and his school.

ament bequeathing the collection to the nation, SOANE provided that nothing should be moved, exchanged, sold or destroyed. That is the way his house and museum in Lincoln's Inn Fields have remained to this day—just as he arranged them between 1812 and his death in 1837.

SOANE's collection of Greek and Roman antiquities is not spectacular, although excluding gems it numbers about five hundred pieces. Nor is it the type of collec-

Sir John Soane's Museum
13 Lincoln's Inn Fields

A recent view of the front of the house and museum as designed and built in 1813. The Erechtheum caryatids on the roof of the façade are reproduced in Coade stone; Gothic corbels from mediaeval Westminster Hall are set between the windows. All photographs are reproduced by permission of the Trustees of the Museum.

tion we associate with the "golden age of Classic Dilettantism" as MICHAELIS characterized the period in which Sir JOHN collected. For those whose thoughts run to collections such as Ince-Blundell, Holkham Hall and Petworth House with their "Pantheons" and galleries of statuary in reflection of the Vatican Museum or the Villa Torlonia-Albani, the Soane Museum is a disappointment. On the other hand, as a perfectly preserved document of the peculiar taste of an individual genius and his circle, the collection is without rival.

It is important for another reason: it was the working collection of a practising architect. Working in the days before photography and free access to the continent, SOANE used his cinerary urns, his foliate columns, his marble vases and his building fragments in the decorative repertory of his own architectural style. When his two sons embittered his last years by failing to follow his calling and profit from the perfect educational environment which he had created for them, he provided that architects of succeeding ages might utilize his antiquities in this very practical manner.

AS A YOUNG MAN SOANE spent two years studying architecture in Rome (1778-80) but he never revisited Italy. The Rome he saw was the Rome of WINCKELMANN and Cardinal ALBANI, of the archaeologist-adventurers GAVIN HAMILTON and THOMAS JENKINS, and of restorers such as CAVACEPPI and ANTONIO D'ESTE. To SOANE above all it was the Rome of the architect-engraver GIAMBATTISTA PIRANESI (1721-84). Speaking of the latter's position on the Roman scene, MICHAELIS wrote in the introduction to his *Ancient Marbles in Great Britain*, "The longing to visit that wonderful city was not a little awakened or stimulated by the magnificent engravings in which the Venetian Piranesi, who was afterwards assisted by his son Francesco, represented the ruins of the Eternal City with wonderful poetic feeling and artistic skill. The four folio volumes of his *Roman Antiquities* appeared A.D. 1756; the *Views of Rome* about a quarter of a century later. Piranesi's name was soon in every-



body's mouth, his works in the libraries of all dilettanti. Men made pilgrimages to Rome to acquaint themselves with these astonishing monuments; whether their exalted expectations were fulfilled or disappointed, depended on the degree of enthusiasm and poetic feeling which they brought with them."

The young SOANE returned from Rome not intending to erect a miniature Museo Chiaramonte in Norfolk, since he had neither the position nor the means to do this. Rather he sought to breathe into his own interpretation of the architectural principles of his time the spirit of PIRANESI's Rome—of *columbaria* crowded with cinerary urns and lighted from the shafts created by the excavators' picks, of the romantic wilds of Hadrian's partially excavated Villa at Tivoli and the Temple of the Sybil above, and of the monuments about the Campo Vaccino, the Arch of Constantine and the Palaces of the Caesars, with marble fragments, statuary, vases lying about the architecture, as

in the paintings of G. P. PANNINI and his followers. When twenty-five years of success afforded SOANE the leisure and means to begin collecting, it was natural that his tastes should follow in these directions. But it was characteristic of him that he had other purposes in mind—the creation of the ideal architectural environment for his sons' education and the assembling of models (casts and genuine antiquities) which could serve as inspiration for his draftsmen.

The foundation of SOANE's classical collection dates from the first years of the nineteenth century, although he undoubtedly possessed a few isolated souvenirs, perhaps even some brought back from Italy, prior to that date. In 1800 he acquired Pitzhanger Manor in the country village of Ealing near London and during the next two years rebuilt the existing structure to suit his own tastes. Fortunately for SOANE, just as he was preparing to form a small collection which he felt would best suit his ideas of decorative ornament and just as he was providing space for these classical antiquities, several large collections of the first modern generation of great English patrons of the antique arts were appearing at Christie's and elsewhere for disposal under the hammer. At the sale of the collection of Baron CAWDOR at Christie's in 1800 SOANE purchased a celebrated large Apulian Mascaroon krater which now adorns the Dining Room of the house in Lincoln's Inn Fields.

With a large house to decorate SOANE undoubtedly

followed the practice carried out on a larger scale in the previous generation by Lord LANSDOWNE at his house in Berkeley Square. He bought antiquities to enrich Pitzhanger and designed niches to be filled later with the proper antiques, usually cinerary urns and small statues. Thus he set a precedent which greatly influenced the formation of the collection at the museum: purchase of antiquities to suit predesigned space rather than planning of rooms to suit particular antiquities. This is one reason why SOANE in 1824 readily paid £2000 for the alabaster sarcophagus of Seti I; it fitted neatly into the Crypt beneath the Dome, and the incised figure inside could be viewed from the surrounding balcony.

HIS FIRST CONSIDERABLE purchase of antique marbles took place at Roehampton in 1801 at the disposal of the contents of the mansion of WILLIAM PONSONBY, Second Earl of Bessborough (1774-93). He acquired six cinerary urns, the Roman altar now in the Catacombs and two statues. These last were the much restored Artemis Ephesia which, according to HERMANN TIERSCH, had a long Renaissance history, and the statue of Asklepios which is said to come from Cardinal POLIGNAC's museum. Both are about a meter high, and one cannot help but feel that SOANE was attracted to them because of their exotic appearance and convenient household size. Price was also a consideration, for while SOANE could, as witnessed by the Hogarth *Election* canvases and the Seti sarcophagus, pay fairly large prices, he generally bought minor objects.

In the following years SOANE bought decorative marbles and painted

The Front Parlor of Pitzhanger Manor, Ealing

SOANE's country residence until 1810; after a colored drawing by J. M. GANDY, A.R.A., in the museum. The architecture and decoration are in SOANE's own highly personal style. The celebrated Cawdor Vase appears on the pedestal at the left, and around the fireplace are other ancient and modern vases and Roman cinerary urns.



vases. Practically all the fifty-odd later Attic, South Italian, Apulian and Campanian vases were purchased at the James Clark Sale at Christie's in 1802. Like the marbles these were of a strictly secondary nature and, as their present position in the Library and Dining Room at 13 Lincoln's Inn Fields reveals, were acquired mainly for their decorative effect. (Lacking a suitable antique to fill a space, SOANE was perfectly content to employ a Wedgwood imitation which created the same impression.) Recent research has revealed the importance of some of these vases, and the not-too-distant future will see the addition of a "Soane painter" to the individualized artists of the Campanian series.

Also in 1802 SOANE purchased seven more cinerary vases and urns at the executor's sale of Baron MENDIP's collection. These cinerary vases included not only dubious *pasticcios* of antique fragments or complete fabrications in the Piranesi tradition but also one urn shown by that master in a romantic engraving of assorted Roman antiquities. When these items were assembled at Ealing, they were set into and flanked recessed niches over the bookcases—round vases on top of square cineraria in the approved Piranesi manner. SOANE's romanticism was held in check only because the setting was still the living room of his house. But a few years later he remodeled 13 Lincoln's Inn Fields to consist of two separate parts—the house in which he lived, decorated in the Piranesi manner, and the museum behind, with antiquities and large architectural casts in a Soane symphony of neoclassical romanticism.

The step which brought the ensemble to its present form occurred in 1810 when he sold Pitzhanger Manor and

The Back Parlor at Pitzhanger Manor, Ealing

From a colored drawing by GANDY. The niches over the bookcases are filled with the cinerary urns and Piranesi vases, and SOANE's plans for the Bank of England appear above an open volume of PIRANESI's engravings propped against the table leg. This house is now the Ealing Public Library in the heart of suburban London.

moved the contents to London. In 1811 he bought the freehold of number 13 and remodeled the house and museum in its present interior form. Two colored drawings by SOANE's chief draftsman, J. M. GANDY, show the Dome of the museum in its then (1813) newly arranged form with a considerable number of architectural fragments, bits of sculpture and the Pitzhanger urns displayed in the exaggerated scale and distorted perspective of the Roman *veduta* designers. At the Robert Adam Sale, conducted by Christie's in 1818, SOANE bought extensively from the collection of the famous architect who had done so much to provide England with architectural and decorative settings for his generation's renewed interest in classical antiquity. The purchases included a large number of architectural fragments otherwise unavailable for three-dimensional study in England. He enriched the Corridor outside the Hogarth Room with a late Hellenistic or Roman column capital in the Egyptian manner which ADAM's friend PIRANESI had engraved. The triumph, however, was a series of extensively "restored" or spurious antique *vasi* which completed the great display of these objects that strikes the visitor approaching the Dome of the museum through the Colonnade. From ADAM's collection also came a very important decorative piece, a sarcophagus front with scenes of the Rape of Persephone, a panel first sketched at the home of Cardinal SFORZA in Rome in the mid-sixteenth century, a time when such reliefs were often used decoratively.



The Dome and Colonnade of the Museum as they appear today

In the foreground are three Piranesi-type cinerary vases. On the opposite balcony in the center of the picture, set amid similar "antiquities," is CHANTREY's bust of Sir JOHN SOANE himself. The wall at the left is covered with casts and antique fragments brought from Rome by ROBERT ADAM, CHARLES TATHAM and others. The head of the Westmacott Athlete after Polykleitos appears on the balcony at the left center, just beyond a forgery after a Roman portrait of an elderly lady.

WITH ONE MAJOR exception, the Holland fragments, SOANE's classical collection now satisfied his needs in that field. These needs were a complete covering of all available space in the museum and house and a satisfactory plastic architectural reference library. His remaining acquisitions were of a minor sort: odd bits of sculpture of generally high quality from the collection of JOHN FLAXMAN. Among them was an archaistic female head from an enigmatic lost processional (?) relief from Trajan's Forum in Rome, of which two other heads survive. Exceptional were several "antique" busts with high-sounding names, Berenice, Livia, etc., including examples from the effects of a sculptor, JOSEPH NOLLEKENS, whose youth in Rome had been passed in contact with the least reliable restorers and dealers. Several of these busts are antique draped and undraped lower portions to which clever imitations of ancient heads have been attached. The thirty-odd bronzes are of the types popular in the early nineteenth century: Etruscan, ordinary Roman statuary and utensils and a few choice examples probably from Pompeii and Herculaneum. Even here SOANE's taste ran to the bizarre,



to the type of antiquities explained by the learned Abbé DE MONTFAUCON in his treatises: statuettes of Harpocrates, Serapis, Silvanus, a Nereid on a Sea Bull, etc.

About 1834, three years before his death, he paid £1000 for a collection of antique, Renaissance and modern gems belonging to RICHARD, Marquis of Chandos and recently Duke of Buckingham and Chandos (1776-1839). Although more gems have proven to be post-antique than either SOANE or the Duke probably realized, Sir JOHN secured not only an excellent bargain but a series of complete lists of the collection assembled by the Duke's librarian. These

notes were published in the first *Description of the House and Museum*, written in 1835 by SOANE himself.

The beginnings of the final episode of Sir JOHN SOANE'S collecting, the acquisition of the Henry Holland Collection of antique fragments presumably from his nephew HENRY ROWLES about 1821, go back twenty-five years to 1794-97 when HOLLAND sent the draftsman-architect C. H. TATHAM to Rome to sketch and purchase antique fragments of all sorts for practical study in architectural design. TATHAM not only brought back a large collection of objects but made careful drawings of each beforehand, often noting where the object had been found or seen at the time. Both the drawings and etchings made from other drawings are in the possession of the museum. When SOANE acquired the collection he placed the pieces in

the remaining unoccupied areas of the house and museum—chiefly in the little Study where they constitute the first major portion of antique marbles seen by visitors entering the museum. Other examples which TATHAM kept for himself were probably among the objects SOANE acquired under the heading "sundry antiquities" at the C. H. Tatham Sale at Christie's in 1833.

Considering the vast numbers of architectural and other fragments which mark the excavated sites of Rome today, one might well ask what would be the excitement of a collection of these dispersed about the walls of a London private home? When wandering about Rome and neighboring sites endeavoring to throw more light on the sources of TATHAM'S acquisitions, the writer was continually struck with the rare variety and high quality of his selection. He collected fragments of cornices, friezes, architraves, capitals, bases, candelabra, shafts and pilasters, table legs, fountains and even a unique Roman sundial in the form of Atlas supporting the world. If he had a tendency in taste it might be said to lean towards "villa" enrichment—the refined and novel decorative schemes of Hadrian's summer retreat at Tivoli. TATHAM'S notes and comparison with known materials *in situ* or of recorded provenance reveal his energy in seeking out diverse selections of all periods of the late Republic and Empire: a piece from the Baths of Caracalla, some fragments from the Imperial Palaces on the Pala-

The Catacombs

A present-day view of this corner of the basement of the museum. Cinerary urns which appear in GANDY'S drawing of the Back Parlor at Pitzhanger Manor are seen amid second-century Roman busts, an altar from Lord BESSBOROUGH'S collection, and sundry other antiquities and casts. The torso to the right of the altar belongs to a Roman copy of one of the famous Niobid types in Florence, in the Capitoline Museum and elsewhere.



vine, a fountain purchased from the restorer ANTONIO D'ESTE, two entire composite capitals from the main court of Hadrian's Villa at Tivoli, a fragment of the lost frieze of the Round Temple by the Tiber, and pieces from Prince BORGHESE's excavations on his private estates. Even with the amount of material excavated in recent years, TATHAM's collection remains one which should not be overlooked by students of Roman decorative arts.

WHAT OF SOANE the classical collector viewed in the light of modern taste and knowledge? Told that his beloved cinerary vases and urns were almost completely modern or at best heavily restored, he would probably hasten to point out that he would not have owned them otherwise, that he had purchased them astutely and would suffer no financial loss in resale, and that they represented a perfect union of the *spirit* and *actuality* of the antique. He would have been extremely pleased to learn that he possessed the only major portion of the Erechtheum frieze outside Greece, a beautiful running female figure in girt chiton. A head, which attracted Sir JOHN under the attribution "Augustus Caesar when a boy," has turned out to be another copy of the so-called Westmacott Athlete type, thought to have been a bronze statue of the boy boxer Kyniskos, executed by Polykleitos and set up at Olympia about 440 B.C.

MANY PIECES REVEAL a rare eye for quality combined with a shrewd business sense—the former not surprising if we accept the tradition that SOANE was one of the first champions of Lord ELGIN in his struggle to have the value of the Parthenon marbles recognized. In some cases, however, SOANE suffered from the errors of judgment peculiar to his time; he purchased forgeries and believed too readily the stories as to romantic locale of discovery attached by eager dealers to otherwise insignificant antiquities. A ghastly eighteenth-century Italian inlaid panel, "A Genius in a Car drawn by Stags," is proudly displayed in the Dome, beneath his own bust by CHANTREY, as having been "found in Hadrian's Villa near Rome."

Sir JOHN SOANE's greatest contribution to posterity in the history of classical collections was the ironclad Act of Parliament which preserved his Piranesi-inspired museum against the ravages of Victorian modernization, for SOANE's passing preceded the advent of that glorious era by exactly six months. We turn again to ADOLF MICHAELIS for a characterization of

the house and museum through the eyes of a Victorian archaeologist: "Along with a few choice specimens of high value, or at least of considerable interest, there is an immeasurable chaos of worthless fragments, of all times, from all countries, of all kinds of art, originals and copies mixed together. All this is crammed into the narrow limits of a private house and is arranged in so ingenious a manner that no corner, however dark, is left unoccupied. In this respect the architect has achieved marvels; nevertheless this labyrinth stuffed full of fragments is the most tasteless arrangement that can be seen. It has the same kind of perplexing and oppressive effect on the spectator as if the whole large stock of an old-clothes-dealer had been squeezed into a doll's house." Fortunately nothing was done to alter an arrangement which confounded those interested in the pieces solely on their individual merits, for these merits are of a collective nature and nothing could have devitalized the Soane Collection more quickly than the removal of the personal touch and creative taste of its arrangement.

ARCHAEOLOGISTS OF the generation after MICHAELIS, while often finding fault with the conditions for viewing their particular specialities, have sallied forth from usually too brief visits to the museum to publish the pertinent results of their explorations. Of greater danger to the collection than any learned criticism from foreign sources were the active threats of 1940-45: on a September night in 1940 a land mine blew out the windows at the front of the museum; two weeks later an incendiary bomb penetrated to the floor of SOANE's Dining Room but fortunately without disastrous results; and in 1942 the entire collection, excluding casts, was removed to the country for safe keeping.

The Herculean labors of recreating the Piranesi dream in one campaign fell to the present Curator, JOHN SUMMERSON, C.B.E., and Assistant Curator, Miss DOROTHY STROUD, F.S.A. The house and museum are now reopened to the public, and archaeologists will find every facility offered for study of the collection newly cleaned and presented in its traditional arrangement. They will surely realize that Sir JOHN SOANE's collection of classical antiquities, the only one of its peculiar selection in the world and comprising pieces of outstanding importance, stands both as the monument of an architect-connoisseur of gifted individuality and as a perfectly preserved document of Italian and English neoclassical taste.



Fig. 1. General view of the sites excavated in 1952, looking westward from the citadel: A, Prehistoric Cemetery; B, Perseia Fountain House; C, Cyclopean Terrace Building; D, Grave Circle excavated by Prof. Mylonas and Dr. Papademetriou in 1952; E, House of the Oil Merchant.

NEW LIGHT ON HOMER

—*Excavations at Mycenae, 1952*

BY ALAN J. B. WACE

*The excavations were conducted with the aid of a research grant from the American Philosophical Society and contributions from the Universities of Cambridge and Oxford, the British Academy, the Leverhulme Trustees and the British School at Athens under whose aegis the work was carried out. The Greek authorities represented by Dr. Papademetriou, then engaged with Professor Mylonas on the excavation of the new Middle Helladic Grave Circle [see *ARCHAEOLOGY* 5 (1952) 194-200], most courteously gave us every assistance and our colleagues of the American School of Classical Studies and the Agora Excavations also afforded us much friendly cooperation.*

—A. J. B. W.

THE BRITISH EXCAVATIONS AT MYCENAE were resumed in the summer of 1952, lasting from June 30th to August 23rd. The main objectives were: further exploration of the part of the Prehistoric Cemetery just outside the Lion Gate to the west (FIGURE 1, A), the examination of the ruins of the Perseia Fountain House, once thought to be those of a Hellenistic Gymnasium (FIGURE 1, B) midway between the Lion Gate and the so-called "Tomb of Clytemnestra," the clearing of the House of the Oil Merchant found in 1950 (FIGURE 1, E) lying by the road

to the south of the "Tomb of Clytemnestra," and further exploration of the Cyclopean Terrace Building which lies at the northern foot of the ridge (FIGURE 1, C) and was partially explored in 1923 and 1950.

In the Prehistoric Cemetery several more graves of the Middle Bronze Age were found with characteristic burials of the period. The most striking finds were what was apparently part of the contents of a rich tomb of the fifteenth century B.C. which had been found and plundered long ago. Fragments of characteristic vases of the period (the so-called Palace and Ephryaeon



Fig. 2. An example of the ivory models of the figure-of-eight shield, typical of Mycenaean battle equipment (about $7\frac{1}{8}$ inches long). All scales are in centimeters.

styles) came to light and with them a remarkable group of ivories. There are four large ivories which are apparently models of the figure-of-eight shield (FIGURE 2) which was part of the equipment of a Mycenaean warrior. [Compare an ivory relief found at Delos, *ARCHAEOLOGY* I (1948) Summer issue, Cover.]

With these four was another yet larger ivory which has at the base a tenon for insertion in a socket (FIGURE 3). Above this are two circles like a figure-of-eight and the whole is topped by yet another circle which is pierced by a triangular opening. The whole thus resembles the Herald's Staff, the caduceus, the symbol usually borne by Hermes. What this object was is by no means certain. It may have been the head of a ceremonial staff or scepter.

Fig. 3. Ivory object, perhaps the head of a ceremonial scepter ($10\frac{5}{8}$ inches long).

This seems the most likely explanation. Another suggestion is that it formed part of a bedstead or chair. Homer speaks of furniture decorated with or made of ivory. This scepter head must have been cut from a good solid tusk for it is $3\frac{7}{8}$ inches (0.10 m.) wide and two inches (0.05 m.) thick.

The Mycenaeans probably obtained their ivory from Syria where the elephant then flourished in the Orontes valley and was hunted by Egyptian and Assyrian kings. There is evidence for an ivory trade running from Syria and Cyprus via Rhodes and the islands to the Greek mainland in the Mycenaean period. In any case, contacts with Syria seem to have been closer than those with Egypt. These ivories were probably originally covered with thin gold leaf, for in the earth round them was a great quantity of the fragments of gold leaf. There is no indication that they were carved with any kind of design and there seems to be no difference between front and back.

WITH THESE IVORIES there was a yet finer ivory, a large plaque with a representation of a griffin in low relief (FIGURE 4). It is made up of two pieces which fit together and formed part of a large scene fastened with ivory pegs to a wooden backing. The head

of the griffin which was on another piece is missing, but the body is drawn and carved with great skill. It is a Mycenaean masterpiece, and since we now believe that the Mycenaeans were Greeks, we must regard it as one of the brilliant early manifestations of that tradition of which Phidias and other ivory carvers of the fifth century were the later exponents. The griffin has the usual spirals on the shoulder where the wings are attached. The lines of the body are drawn with great strength and the hind and fore legs are splendid in the delineation of the muscles. If griffins were not fabulous animals we might call the execution of this carving lifelike or even imagine that the artist had a tame griffin





Fig. 4. Part of an ivory plaque with griffins carved in low relief ($9\frac{7}{8}$ inches long).

as his model in his studio. The presence of another forefoot on the left indicates that the scene showed two griffins in corresponding attitudes confronting one another. The whole must therefore have been at least twenty inches long. It ranks as one of the largest and finest Mycenaean ivory carvings yet found.

In the same area, and so probably from the same plundered tomb, was found the handle of a silver cup of the same type as the well known gold cups from Vaphio (FIGURE 5). The barrel of the handle and the upper and lower plates are inlaid with gold and niello in the usual Mycenaean manner which did not inlay gold direct into silver, but with an intervening band of niello. The inlay on the top plate shows two rosettes. The cup to which this handle belonged was probably richly decorated and it is tantalizing to possess only its handle.



Fig. 5. Gold and niello inlaid handle of a silver cup ($2\frac{1}{8}$ inches long).

THE RUINS ONCE thought to be part of a Hellenistic Gymnasium proved on complete excavation to be those of the Perseia Fountain House seen by Pausanias on his visit to Mycenae in the second century of our era (FIGURE 6). There are two basins set in front of a long terrace wall. The eastern and larger one has a paved area in front of it and was probably roofed.

This was perhaps the basin for human beings while the western and narrower basin was perhaps that for animals, sheep, goats, cattle, horses and donkeys. Although there are indications of installations for water of earlier date this Fountain House is Hellenistic and was built when Mycenae was reoccupied as a dependency of Argos in the third century B.C. It was among these ruins that the Greek archaeologist TSOUNTAS seems to have found the inscription referring to Perseus and having to do

with some form of water supply. Built into the western basin we found a boundary stone of a shrine of Hera dating from about 475 B.C. This shrine probably existed somewhere in the neighborhood and is further evidence for classical Mycenae. With the identification of the Perseia Fountain House and the acceptance of the new Middle Helladic Grave Circle (FIGURE 1, D) as the site pointed out to Pausanias as the burial place of Clytemnestra and Aegisthus outside the walls, all the monuments mentioned by Pausanias have now been identified except one, the Tomb of Atreus. Pausanias says only, "There is a Tomb of Atreus," but gives no further clue to its position or appearance. If it was in the same general area as the Perseia Fountain House further excavation in this region may bring



Fig. 6. Perseia Fountain House, mentioned by the traveler Pausanias who saw Mycenae in the second century.

Fig. 7. (Right) A group of tools belonging to a bronze worker, including chisels, adze, hammer and double axe.

this legendary tomb to light.

Just south of the Fountain House was found a small hoard of bronzes which seemed to be the stock in trade of a bronze worker and to have been carried in a bag of some kind. They include several curved knives, some tools (two chisels, a drill and a hammer), a double axe, an adze, a dagger (FIGURES 7 and 8), the handle of a large cauldron and some pieces of ingots of the usual hide shape. Running southwards on the slope at this point is a long wall (sixty-five feet or more long) of soft limestone, well built in ashlar with a rubble backing. Its purpose is still obscure. Near it were found many vases including a fine askos which much resembles modern American water pitchers, and a large

piece of a vase showing a man and a woman driving in a chariot (FIGURE 9). This especially fine example probably dates from the later fourteenth century B.C.

IN THE BASEMENT of the House of the Oil Merchant in 1950 we found a storeroom with large pithoi ranged along the walls as described by Homer in his account of the storeroom in the house of Odysseus. At the northern end of a long corridor there were thirty large stirrup jars which had been stoppered and sealed with clay (FIGURE 10). The house had been looted and deliberately burnt and the stirrup jars which seem to have contained oil appear to have been purposely broken or unstoppered so as to add fuel to the fire. The stoppers and spouts of the stirrup jars had been covered with clay caps (called by Homer *κρήδεμνον*) and then impressed with signets to mark the ownership or brand of the oil contained in them, and to prevent any tampering with the contents (FIG-



Fig. 8. A dagger found with the bronze worker's tools, probably part of his stock.

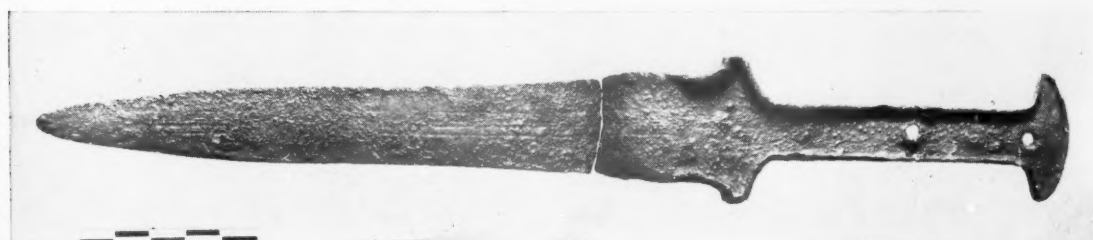




Fig. 9. (Above) A large vase showing a charioteer accompanied by a woman, preceded by an attendant.

Fig. 10. (Right) Some of the thirty "stirrup" jars found in the House of the Oil Merchant at Mycenae. Each of them had been stoppered and sealed with clay caps.



Fig. 11. (Below) Stirrup jar from the Oil Merchant's House, showing seal on the spout covered with clay cap.



URE 11). Three signet impressions are quite clear, an ox scratching its nose with its hind leg, a demon between two lions, and three girls dancing. These were, so to speak, the trade-marks of the oil producers. In another room of the basement many vases were found which date the flourishing period of the house to the thirteenth century B.C. In two rooms of the basement thirty-eight clay tablets (FIGURE 12) were found inscribed in the Linear B Mino-Mycenaean script [see *ARCHAEOLOGY* 1 (1948) 210-220]. These, except for a surface find in 1950, are the first tablets to be

found at Mycenae and the first to be found anywhere in a purely private house. They are of the same type as those from Pylos [see *ARCHAEOLOGY* 5 (1952) 130-135] and Knossos and all seem to be accounts or inventories. Some of them refer to a commodity which is believed to be a liquid. Is it oil? No less than six hands inscribed these tablets, which indicates that reading and writing were presumably more common than has hitherto been supposed. Elsewhere we found a stirrup jar with a painted inscription in the same script. Many inscribed stirrup jars are known from Mycenaean sites, Tiryns, Mycenae, Thebes, Eleusis, Orchomenos, and they show that the people who handled such objects could read because otherwise there would be little or no point in inscribing them. The inscriptions may refer to the contents or to the capacity. Since we now believe that the Mycenaeans were Greeks who had first entered Greece at the beginning of the Middle Bronze Age about 1900 B.C., it is logical that we should believe that the Linear B script when deciphered will prove to be an early form of Greek. Thus the continuance of the excavations at Mycenae may well result in the discovery of more tablets and



Fig. 12. One example of the thirty-eight inscribed clay tablets found stored in the basement of the Oil Merchant's House.

ots, hunting scenes and the like, it is possible that this might be an artist's preliminary study for part of a fresco design. A tablet from Knossos seems to have designs for engraving on gems. In Mesopotamia figures of men and animals are known on early tablets. If we can admit that the Mycenaeans used tablets to draw designs for frescoes, we could also imagine that Mycenaean architects drew the first plans of their buildings on clay tablets. In this connection we can refer to a tablet found at Tell Asmar of earlier, Akkadian, date which shows on each side the plan of a building.

IN THE CYCLOPEAN Terrace Building complex at the northern foot of the ridge a large storeroom was discovered which formed part of a house known as the House of the Wine Merchant. In this storeroom which was thirty-three feet long were at least eight large storage pithoi about five feet (1.70 m.) high (FIGURE 14). These have small bases, wide bodies and somewhat smaller mouths. Thus since they were top-heavy they, like the similar pithoi in the Oil Merchant's house, had to be supported on either side by stout rectangular supports of clay. Among the shattered remains of these storage jars lay over fifty stirrup jars, some practically complete and some broken to pieces. Among them we found over

thus help towards the successful decipherment of the script, which has already made good progress.

On the back of one tablet (FIGURE 13) there is an unusual feature, a sketch of a man who wears a short kilt and stands at attention. The sketch is vigorous and lively and the anatomy and proportions are distinctly good. It can hardly be a casual scribble, but since we know that the Mycenaeans decorated the walls of their houses and palaces with gay fresco paintings of men and women, chari-



Fig. 13. Clay tablet with an account on the front (shown sideways) and sketch of a man on back.

eighty discs chipped from stone or pottery which have usually been interpreted as counters for a game. It is obvious that in this case they cannot be counters. Forty years ago near Sparta Professor DAWKINS found the clay sealings from two wine jars. A disc of pottery was first laid on the top of the spout. This was covered with vine leaves and the whole was then completely sealed with a cap of clay which was afterwards impressed with a signet. The stirrup jars from this storeroom show no signs of oil and may well have been intended for wine. So far no impressions of signets have been found here and so perhaps the stirrup jars were empty and waiting with their caps for filling. With them lay a fine rhyton or funnel (FIGURE 15) decorated with a bold octopus pattern which could have been used to fill the stirrup jars from the big storage jars. It dates the house

Fig. 14. Storage jar from House of the Wine Merchant.



to the thirteenth century before the Christian era.

TWO INTERESTING FACTS emerge from the excavation of these houses. The first is that in the thirteenth century B.C. Mycenae must have been not only prosperous but also at peace. Otherwise we can hardly imagine that if there was risk of war or invasion the wealthy merchants of Mycenae would have built such

Fig. 15. Rhyton, or funnel, with octopus pattern, from Wine Merchant's House.



big houses outside the protection of the Cyclopean walls of the citadel. In any case their destruction seems not to have been due to foreign invasion, but rather to some internal disturbance such as a civil war. Could this have been the strife between Atreus and Thyestes for the throne of Mycenae?

The second fact is that almost every large Mycenaean house seems to have held in its basement a storeroom with big stirrup jars. At Mycenae we have such storerooms with stirrup jars in the House of the Oil Merchant, in the House of the Wine Merchant and in the House of Columns, and a large stirrup jar of the same type was found below the ruined Ramp House. Elsewhere at Zygouries, at Tiryns, at Thebes, there were large numbers of big stirrup jars. Finally, we see that almost every Mycenaean house had a basement. This agrees with the text of Homer for it is clear that the house of Odysseus had a basement and the palaces of Priam and Menelaus also had basements. Homer has preserved many features of the Mycenaean civilization, and the more we can explore houses like these at Mycenae the more illustrations we shall find to help us elucidate the text of Homer.

A NEW TEMPLE AT TIKAL

By Heinrich Berlin

*Born in Bavaria, the author came to Mexico in 1935 and studied archaeology at the Universidad Nacional Autonoma de Mexico (M.A., 1942; Ph.D., 1947). Dr. Berlin excavated at Palenque for three seasons (1940-42). From 1949 to 1952 he was research assistant at the National Museum in Guatemala and lecturer at the Universidad de San Carlos of Guatemala. Since October 1952 he has been a fellow of the Carnegie Institution of Washington, engaged in archaeological research in the Mexican state of Tabasco. Dr. Berlin is interested not only in archaeology but in the field of Colonial Latin-American Art, and last year his *Historia de la Imagineria Colonial en Guatemala* was published by the Guatemalan government.*

Tikal, the new temple. A view of the rear showing the installation for copying the inscription. Because of the thickness of the forest growth, it is virtually impossible to secure a view of the whole temple.



IN THE HEART OF THE JUNGLE OF THE PETEN IN Guatemala lies Tikal, the largest city of the old Maya territory. Discovered a hundred years ago, the site could be reached only by mule until 1951, when the government of Guatemala installed an airport there, and now it is a flight of only an hour and a quarter from Guatemala City. Thus a hurried tourist can visit the place in one day. Though the site has been known for hundreds of years, the jungle around the old buildings is so dense that even today nobody knows the exact extent of the city. Normally visitors, even professional ones, spent all their time—conditioned by the amount of food they could take along—just to inspect the buildings already known. A major discovery is due to EDWIN M. SHOOK of the Carnegie Institution of Washington, who in 1937 followed traces of a road going out from the main center of the city and was thus led to a group consisting of one large temple and several smaller ones. In the same group SHOOK was fortunate enough to find a carved altar and a carved stele, plus several uncarved ones.

But the most interesting discovery of recent years took place in 1951. Several soldiers engaged in the

work on the airstrip at Tikal went on a hunting party and suddenly came across an impressive temple which they climbed. They proudly reported the discovery to ANTONIO ORTIZ, official caretaker of the ruins at nearby Uaxactun. When the airfield was inaugurated on May 20, 1951, ORTIZ conveyed the news to Señor ANTONIO TEJEDA F., who attended the inauguration as the delegate of the Instituto de Antropología e Historia de Guatemala. Though extremely sceptical, Señor TEJEDA nevertheless followed ORTIZ into the jungle. And then he saw what he never expected, not a forgotten building rediscovered, but an impressive temple with a lofty roof-comb which almost reached the tops of the tall forest trees. An enormous inscription on big blocks measuring two by three feet was placed on the rear of the roof-comb. Despite the difficulties in taking pictures of an uncleared building in the forest, Señor TEJEDA brought home from that trip a successful photograph and a hasty sketch. Back in Guatemala City it sounded unbelievable that such an important building should not be known, but a search in the literature failed to give any information; not even the careful MORLEY had mentioned it in his five volumes on *The*

Inscriptions of Peten. There was then no further doubt—something definitely new had been discovered at Tikal, something unique in the Maya area.

In order to explore the temple more thoroughly, in the following month the Instituto sent out an expedition which stayed at Tikal for about a week. Although it was then the rainy season, the weather was so dry that water had to be flown in from Lake Peten twice a week. The reservoir built by the ancient inhabitants of Tikal a thousand years ago had long since decayed and no longer held water.

Now, after closer inspection, it was found that the temple stands in a small enclosure formed by low walls. These walls do not join at the western corner but run as parallel lines westward to the main plaza, forming a road or *zacbe* (white road) as it is called in Maya. The total distance from the new temple to the last already known building of the archaeological zone is less than half a mile. As a matter of fact, a trail to Lake Peten has always crossed the *zacbe*, but as the walls are so low and unimpressive no one ever cared to follow them to find



Tikal. Stelae on the main plaza.

out where they might lead. Indeed, only after the temple was discovered did their purpose become apparent.

WHILE THE LARGER temple discovered in 1937 by SHOOK was surrounded by several smaller ones, thus forming a group in the northern outskirts of the city, the one discovered in 1951 stands completely isolated. A search in its immediate neighborhood did not reveal any more buildings, not even remnants of them. Only one small mound was found inside the temple enclosure and several more mounds toward the east, but so far away that one cannot logically connect them with the temple.

The new temple—like all major temples at Tikal—is erected on a pyramid, in this case approximately thirty-six feet high. As the temple itself towers fifty-five feet, the total height of the structure is ninety-one feet above ground. But even so, the temple cannot be seen from the air because the forest trees are still higher.

The whole pyramid is completely overgrown and covered with debris; therefore its exact shape is still unknown. At the west a steeply ascending stairway must have led to the temple, but the façade of the latter has collapsed. The temple itself consists of two long



Tikal, a restoration of Temple III, similar in form to Temple VI, the new temple. Tikal is the largest known "city" or ceremonial center of the classic Maya region and period. Its pyramids are the highest and steepest known, and their height is increased by the great roof-combs on the temples. Only surface exploration and superficial digging have been carried on here. From Proskouriakoff, *An Album of Maya Architecture*.

parallel galleries. From the outer one three doorways lead into the open, but only one connects with the inner gallery. All the doorways were spanned with wooden beams, only a few of which are still preserved. When analyzed by the new carbon 14 method these beams may give us the approximate date when the temple was erected.

Inside the rooms nothing special could be detected. Only the outer gallery has incised drawings—*graffiti*—on its walls. These are hasty childish scratchings, perhaps made when the site had ceased to be a major religious center. Probably also to this time belong the red impressions of hands found on the same walls.

Originally the interior gallery must have been of the same length as the outer one, but later it was reduced, perhaps better to carry the weight of the top roof-comb. As the inner gallery has no windows, all light has to enter from the outer one.

The roof-comb, a feature common to all the large temples of Tikal, is a kind of tower set on top of the rear portion of the temple proper. From the outside this roof-comb looks like an enormous mass of stones, but in reality it is hollow, a giant rectilinear soap bubble, subdivided into three chambers, one on top of the other. As these chambers had no entrances they could not be seen from the outside; only through cracks are they visible now. Thus the old Maya architects achieved with a minimum of material and labor a maximum of height and impressiveness.

At Tikal these roof-combs are the favorite place for exterior decoration. In our case it had a large stucco decoration on its western side, but it is now so poorly preserved that the composition is no longer intelligible; only a big mask in the lower center is still recognizable.

On the rear it has a large inscription which covers only a central panel, twelve feet wide. The narrow side walls were once also covered with glyphs but now they are mostly gone. The glyphs were first roughly outlined in stone sculpture and then covered with a stucco plaster in which all the finer details were modeled. Finally the whole inscription was painted red.

OUR KNOWLEDGE of Maya hieroglyphs is still very inadequate, being practically limited to numerals and to calendrical and astronomical data. Though many of these appear in our inscription, no date could be read with certainty owing to the weathering of the glyphs. There are, however, some indications which lead the writer to believe that the inscription should be dated at 9.16.15.0.0 in the Maya chronological system. As the correlation between Maya and Christian dates is now under renewed discussion, no definite Christian year can be given for the proposed reading. It should, nevertheless, be somewhere between A.D. 500 and 800; that means, during the very first centuries of the European Middle Ages.

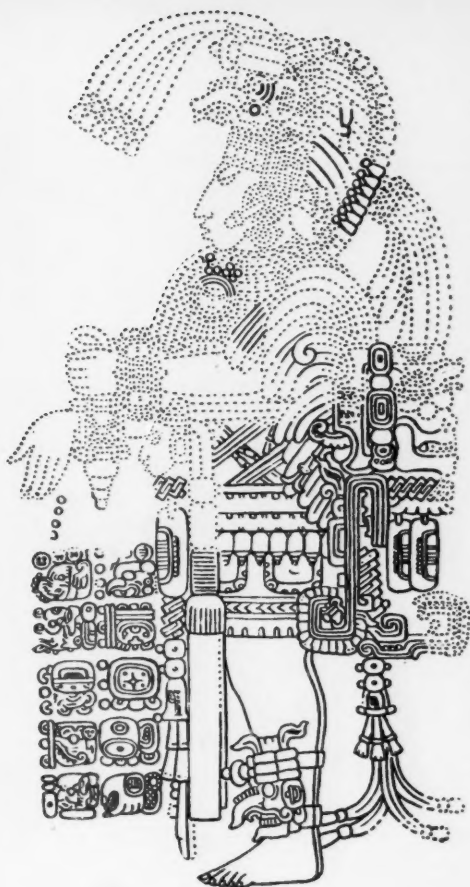
At the western base of the pyramid five stelae, each with a round altar stone in front, were found. Four of these pairs are plain; only one—the nearest to the temple—is carved. Apparently a falling tree hit the carved stele, tossing it against the altar; at the same time the blow broke the upper part of the stele into many pieces. Thus a fine and delicate masterpiece of Maya sculpture in low relief was destroyed; it must have ranked among the best ever produced by the Maya. On it was depicted an important personage, shown in profile (see illustration). To our minds it seems strange that he is barefoot but nevertheless has anklets with a grotesque mask. Around his waist he wears a lavishly decorated



Tikal. Plaza in front of the new temple showing some of its stelae and altars.



Tikal, stele 21. On the left a photograph and, right, a restored drawing of the new stele by G. Grajeda Mena. Enough survives to indicate that, as in many better preserved examples, the stele showed a standing priest wearing a feathered headdress, and his body also was well loaded with symbolic ornaments. Univalve shells hang from his belt, and his anklet is the head of a



deity known to scholars as "God B." Drawing from Berlin, "El Templo de las Inscripciones, VI de Tikal."

loincloth apron and a belt. The upper portions of the body, including the face and the headdress, are entirely destroyed.

An inscription consisting of ten glyph blocks is carved in front of the personage. Fortunately this small inscription is perfectly preserved and the deciphering of the interpretable parts offers no difficulties. Thus we may read (supplying matter in parentheses):

(9.15.3. 6. 8)	3 Lamat 6 Pax
Plus 1.11.12	
(9.15.5. 0. 0)	10 Ahau 8 Chen)

Normally, archaeologists assume the most recent date in an inscription to be the contemporaneous date, which means that of the erection of the monument. Here it would then be 9.15.5.0.0. For the inscription of the temple we suggested the contemporaneous date of 9.16.15.0.0 which would make it thirty years younger than the stele.

The carving of the altar is badly eroded. It shows a bound captive lying on his stomach with head raised. In a square, above the captive, traces of an inscription can still be seen which once might have contained the clue to the meaning of this altar.

Beneath the stele a cache was found containing sev-

Incised flakes of obsidian found beneath stele 21. The Maya frequently buried caches of ceremonial objects beneath the stelae when they were erected. These small flakes are characteristic of Tikal, but the material had to be brought from the volcanic highlands as a trade item since it is not native to the low, flat Peten region. Presumably some of the figures are deities. From Berlin, "El Templo de las Inscripciones, VI de Tikal."

eral eccentric flints and nine incised flakes of obsidian. The nine obsidian flakes probably refer to the nine Lords of the Night who are known to us through the Aztecs. Two of the gods depicted on the flakes can be made out with reasonable certainty; they refer to the deities of the sun and moon. The workmanship of the incision is extremely poor, and from an aesthetic point of view it would seem unbelievable that these crude designs are to be considered as contemporary with the superb carving of the stele. But, buried beneath the stele, the obsidian flakes were not intended to be seen and, since even scratching hard obsidian without any metal tool requires a tremendous effort, it is understandable that no greater beauty was achieved in this work. As obsidian does not occur in the neighborhood of Tikal or in that region, the material itself must have been precious to the Maya, and a valuable and esteemed piece of trade.

THE RECENT DISCOVERIES at Tikal have shown that the extent of the city was much greater than formerly suspected, even assuming that the huts of the laborers may have clustered around the religious center. Now the religious center turns out to be even larger. As no real excavations have ever been performed at Tikal we know nothing of the city's history. Now it becomes evident that we do not even know its exact extent. Hidden in the green ocean of the jungle of wonders there may still remain many buildings which a future visitor may suddenly discover. For the eager traveler willing to bear the hardships of the Peten there is always a chance of coming home with a startling find, even without using a spade or pick. When the Spaniards first arrived in the Maya territory



they marveled at the achievements of that American race. Today we know much more about the Maya than the Spaniards did, but we are still far from knowing the full story. In comparison with classical archaeology, that of Middle America has been badly neglected. There is a field waiting for more harvesters.

ADDITIONAL READING

HEINRICH BERLIN, "El Templo de las Inscripciones, VI de Tikal," *Antropología e Historia de Guatemala*, volume 3, no. 1 (January 1951)

TATIANA PROSKOURIAKOFF, *An Album of Maya Architecture*, Carnegie Institution of Washington, 1946 (Publication 558)

FROM TUMULUS TO PYRAMID —AND BACK

By Dows Dunham

Curator of Egyptian Art, Museum of Fine Arts, Boston

THE PYRAMIDS—THESE WORDS EVOKE A PICTURE of the great monument built by Cheops of the Fourth Dynasty which rises on the desert plateau near Cairo, accompanied by the lesser tombs of two of his immediate successors, all three built before the middle of the third millennium B.C. These world-famous tombs are neither the oldest nor the only pyramids in the Nile valley. Many travelers have visited the pyramids of Sakkara, Dahshur, Meydum and Hawara which dot the western edge of the valley from Giza to the Fayum and cover the period from the Third through the Twelfth Dynasties of Egyptian history. But few are the travelers whose wanderings have taken them far south into the Upper Nile country of the Sudan, which the ancient Egyptians called "the Land of Kush" and classical authors referred to somewhat more vaguely as Ethiopia, a name applied in modern times to the mountainous Kingdom of Abyssinia. Few are aware that in this southern region of Kush there are more preserved pyramids than are to be found in Egypt itself, and fewer still know how they came to be there and when they were built.

During a series of campaigns between 1914 and 1923 the Harvard University - Boston Museum of Fine Arts Expedition,

under the direction of that great digger the late GEORGE A. REISNER, excavated a series of sites between the Third and Sixth Cataracts of the Upper Nile, including all the pyramids of Kush. This work has thrown a flood of light on the history of a region hitherto little known to us. The ancient Egyptians had been familiar with this country from earliest times. They raided it for what they could seize. They traded with it, and they conquered and administered it during the Empire. Later they neglected it, lost it, and were subjected by it, but impressed their culture upon its ruling class. And then the rulers of Kush withdrew into their own country, there to preserve for many centuries a notable degree of civilized culture hemmed in by barbarism. The kings and queens of Napata and Meroë knew and had relations with the Greeks of the Delta cities of Egypt and with the Ptolemies of Alexandria. They were raided by the Romans under Petro-

nus, and the city of Meroë has yielded a magnificent bronze head of the Emperor Augustus now preserved in



A circular tumulus of about 2000 B.C. at Kerma, before its excavation. Originally much higher, it has been greatly denuded despite the ring of black pebbles placed on its slopes to prevent such an extreme result of wind erosion.

the extensive collections of the British Museum.

In a series of royal cemeteries near the two principal Kushite towns of Napata and Meroë there are some 180 pyramids, the burial places of the kings, queens and princes of Kush from about 750 B.C. to A.D. 350—more than a thousand years. The excavation of these cemeteries by REISNER and his assistants is now being reported by the writer in a series of publications under the general title *Royal Cemeteries of Kush*, of which volume 1 *El Kurru* and volume 3 *Decorated Chapels of the Meroitic Pyramids at Meroë and Barkal* have already appeared, and further volumes are in preparation. Here there will be space to deal with only one aspect of the work.

ONE OF THE most significant aspects of these excavations is the light thrown on the evolution of local burial customs. Upstream from the Third Cataract lies the site of Kerma¹ which was during the Middle Kingdom a great center of trade and manufacture. Its vast cemetery yielded information on the peculiar burial customs of the local inhabitants which were strikingly different from those of Egypt itself at this time. These people were buried in a natural sleeping position on a bed, accompanied by their weapons, toilet articles, objects of daily use and ornaments. In the

Central corridor of the great Tumulus X at Kerma with the bodies of over 300 sacrificial victims. This enormous tumulus was preserved from wind erosion by a system of internal mud-brick walls—two are visible here.



Typical of the burial customs found at Kerma. The body of the owner of Tomb 435 lying on a bed as if asleep, with the bodies of two sacrificial victims on the floor. The picture was taken looking southeast.

graves of important persons were also found one or more secondary burials, servants or wives, who were sacrificed at their master's death so that their spirits might continue to serve him in the hereafter. The whole was covered with a circular gravel mound or tumulus, the only visible monument to mark the burial place. A few of these tumuli were of very great size and contained hundreds of sacrificial burials. Such methods are in sharp contrast to Egyptian practice of the Middle Kingdom where the dead were mummified and placed in coffins, and were buried under rectangular brick or masonry tombs or in sepulchres hollowed out of the rock. To these monuments were attached mortuary chapels equipped with ritual scenes and inscriptions. Human sacrifice was not practiced.

Passing on to Napata at the foot of the Fourth Cataract, the cemetery of El Kurru contains the tombs of ancestors and early rulers of the Kingdom of Kush, beginning about 850 B.C. The site before excavation was marked by a number of low circular mounds as well as by the rectangular outlines of denuded structures which proved on excavation to be the remains of mastaba and pyramid tombs. The latter yielded inscribed objects which identified them as the burial places of kings named Piankhy, Shabako, Shebitku and Tanwetamani (formerly known respectively as Piankhy, Shabaka, Shabataka and Tanutaman). These four kings had long been familiar to Egyptologists and, together with Taharqa, constituted the Twenty-fifth or "Ethiopian" Dynasty of Egypt. They were known to have come down from

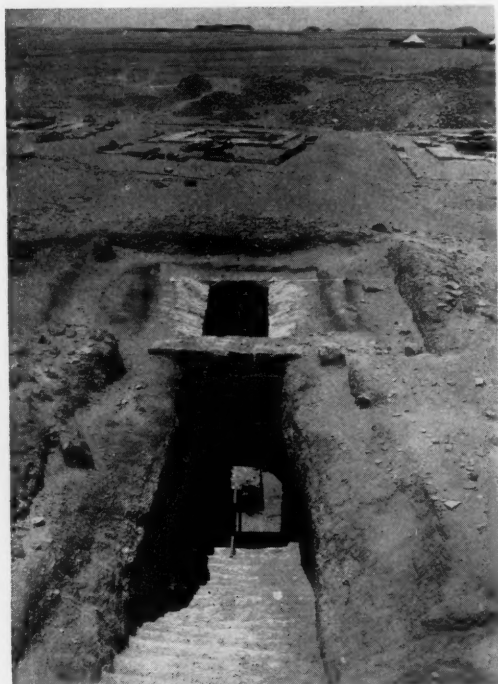
Mastaba—a rectangular structure with battered sides and flat top. The name of this form of tomb is that used by modern Egyptians to describe the mud-brick benches found in front of peasant houses.

Shawabti—little mummiform figures buried with the dead in order to perform such labor as might be required of him in the next world. Usually of glazed faience but sometimes of stone, wood or pottery. Also called *ushabti*.



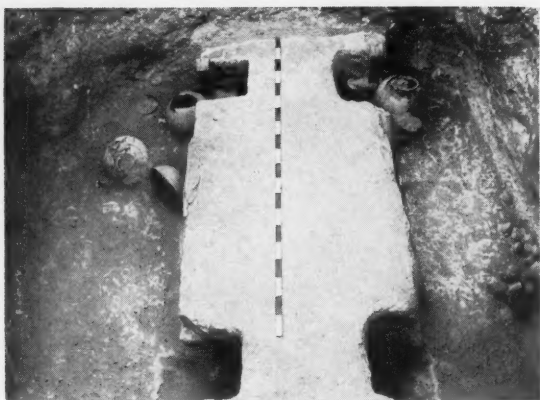
Part of the Cemetery of El Kurru before excavation. The remains of ancestral tumuli are visible at the upper left, and in the right foreground are traces of the first small pyramid, the tomb of King Piankhy.

the Land of Kush about 750 B.C., to rule Egypt for about a century, but their antecedents and their



burial places had remained obscure. The circular tumuli at El Kurru proved to be the tombs of their ancestors which, although heavily plundered, bore certain interesting resemblances to the earlier sepulchres at Kerma. Beneath the tumulus the grave was oriented north-south and the body, in the one instance where it was partially preserved, lay in a sleeping position with the head to the south, facing east. There was no evidence of mummification, burial in a coffin, or other characteristic Egyptian practice. This is in marked contrast to the tomb of King Piankhy, first of the Twenty-fifth Dynasty kings. His monument was a small stone pyramid, he had lain in the burial chamber on a bench oriented east-west in the Egyptian manner, his body had been mummified as evidenced by the finding of Canopic jars, and the tomb was equipped with shawabti figures, a normal element in Egyptian funerary equipment at this time. One non-Egyptian feature only reminds us that Piankhy was no Egyptian. His mummy had lain on a funerary bed supported by a stone bench, the four corners of which had been cut out so that the legs of the bed might rest on the floor.

The Tomb of King Piankhy after excavation, looking west. The stairway leading to the burial chamber and a corner of the bench on which his body had been laid on a funerary bed are visible. The chamber had been roofed by a masonry corbel vault, partly destroyed, and of the pyramid which once rose above it only the rectangular foundation trench remains.



The rock-cut bench of a queen's tomb at El Kurru, with two of the bronze legs from the funerary bed still standing in their niches at the farther end of the bench.

This type of burial was employed for the three kings who preceded Taharqa as well as by their queens, in one of whose tombs two bronze legs of the bed itself still stood in the cut-outs reserved for them in the bench. The most striking object found in Piankhy's tomb was an elaborate bronze libation stand of unique design.

Thus at El Kurru we have been able to trace, during the lapse of about a hundred years, the transformation of essentially Kushite burial customs into those of Egypt itself with but minor variations. The circular

gravel tumulus was first stone-cased, then enclosed within a rectangular mastaba, and this in turn, no doubt under the direct inspiration of what they had seen in Egypt, the kings transformed into a true pyramid as more fitting for the tomb of a ruler. The burial position changed from that of the un-mummified sleeper with head to the south to the extended mummy with head to the west. The element of human sacrifice had disappeared before the period represented by El Kurru. Only the use of the funerary bed remained.

THE GREAT CEMETERY at Nuri, founded by Taharqa (the Tirhakah of *II Kings* 19:9) contained the pyramids of his successors and their wives for the next three and a half centuries, ending shortly before 300 B.C. Within a generation or two after its founding the transformation from local to Egyptian burial practice had become complete. Even the women, with whom custom seemed to have changed more slowly than in the case of their husbands, soon abandoned burial on a bed. These tombs show all the characteristics of good Egyptian practice: mummification, the use of shawabti figures, stone sarcophagi or anthropoid coffins, chamber walls inscribed with Egyptian funerary texts, and all the paraphernalia of Egyptian funerary magic. During the early period at Nuri the picture is one of well-nigh complete transplanting of Egyptian culture at its best to this distant region of the Sudan. The Egyptian language was understood and correctly written, and the objects placed in the tombs were often

as fine in quality as could be found in Egypt itself. As time progressed, however, a marked deterioration set in, especially in the understand-



Bronze leg of a funerary bed (far left) found in a queen's tomb at El Kurru. Of the original four, two were found, the others having been taken by ancient plunderers. Note the holes near the top of the leg for insertion of wooden side and end bars of the bed frame.

Bronze libation stand (near left) found in tomb of King Piankhy. This unique object, crushed by rocks, was restored to its original form in the Boston Museum of Fine Arts.

An early Kushite burial at Meroë: remains of a skeleton which had lain as if sleeping on a wooden bed, the legs of which once rested in the four bronze vessels in the corners of the grave. An unusually rich burial plentifully supplied with beads, amulets, a bronze mirror (in foreground) and numerous stone and metal vessels.

ing and writing of the language.

Meanwhile far to the south between the Fifth and Sixth Cataracts the provincial town of Meroë had been growing in importance. Its cemeteries show that it was a place of consequence as early as the time of Piankhy, for they contain many rich private graves of the bed-burial type as well as others with extended burials in coffins. By about 550 B.C. the town had become a royal residence of importance and secondary members of the royal family began to make their tombs there. In one of the mastaba tombs of about the middle of the fourth century the owner had deposited a beautiful rhyton (drinking vessel) which bore the signature of the potter Sotades who had worked in Athens a hundred years earlier. King Nastasen, who died in 308 B.C., was

A Greek rhyton (drinking cup) representing an amazon on horseback. A beautiful example of fifth-century art, signed by the well-known potter Sotades. It was found in a tomb at Meroë dated to approximately a hundred years after this artist was working in Athens.



the last king to be buried at Nuri. Thereafter Meroë, which had long since become the seat of administration and the principal royal residence, became also the site of the royal tomb.

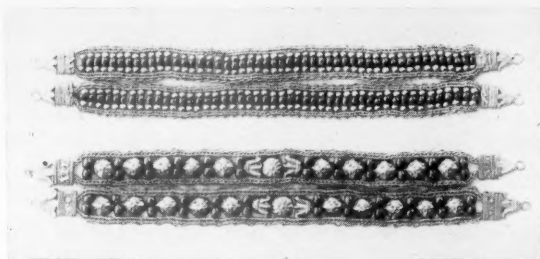
THE OLD SOUTH Cemetery at Meroë had been in use from early Napatan times and was now taken over as the site of the kingly pyramid. But within a few generations suitable space there was exhausted and the royal builders moved across a narrow valley to a curving ridge and founded the North Cemetery, which thereafter became the site of the royal tombs, remaining in use from about 250 B.C. for some six hundred years. The great line of pyramids along the ridge of the North Cemetery is an impressive sight despite the depredations of time and human plundering. A glance at our illustration shows that many of these monuments are now truncated, although when built they rose almost to a pointed apex. How this came about is an interesting story of human cupidity.

It appears that in 1830 an Italian adventurer, GIUSEPPE FERLINI by name, who was in the service of the



A view of the North Cemetery at Meroë looking southwest along the ridge. The removal of the tops of most of these pyramids was the result of a false report that they concealed secret chambers full of rich treasures.

Two sets of bracelets (right) belonging to a Meroitic queen. Gold and carnelian beads threaded on gold wire with braided gold wire borders. This royal lady's servant, buried with her, carried these and other personal ornaments of her mistress in a little linen bag.



Turkish pasha then ruling the country, obtained leave to explore the pyramids of Meroë. Just what he did there is not recorded, but presently he turned up in Europe with a precious hoard of gold rings, necklaces and ornaments of startling richness and value, together with bronze vessels of Alexandrian type, all of which eventually passed into the Berlin and Munich collections in Germany where they have been known ever since as the "Ferlini Treasure." When pressed as to where he got them he told a tale of having discovered a secret chamber near the top of one of the pyramids in which this hoard had been hidden. His story was certainly untrue, for subsequent excavation has made it evident that he must have broken into one or more of the royal burial chambers beneath the pyramids, where objects of similar nature have been found by the Harvard-Boston Expedition. No doubt his purpose was to keep the secret to himself and return to exploit this lucrative site at some future time. This he never did; but others took his tale at face value and it was not long before the top of nearly every pyramid had been

Silver goblet in Roman style with a relief scene apparently representing a judgment scene. Dropped by plunderers among the blocks from the pyramids in the North Cemetery, it certainly originated in one of these tombs.



Bronze head of Dionysus; one of two found in a prince's tomb of the early first century A.D. in the North Cemetery at Meroë. It wears a fillet of vine leaves and grapes and is undoubtedly an import from Alexandria.

removed in search of treasure. At the beginning of this century one excavator actually took down an entire pyramid stone by stone, but found nothing. The location of the burial places of these Kushite pyramids was not discovered in modern times until REISNER with painstaking and thorough trenching operations found their entrance stairways, cut in the native rock, well to the east of the buildings. Each stairway led down to a sealed door and a series of subterranean chambers far beneath the pyramid itself.

The royal pyramids at Meroë proved to be in the direct line of descent from the latest of the Nuri burials. The deterioration which we saw beginning there continued. Classical Egyptian influence was rapidly waning and, apart from the exceedingly skillful jewelry of local manufacture, the finest objects found on the site appear to have been largely imports from the Hellenistic world centering at Alexandria during the Ptolemaic and Roman periods.

BUT WHAT OF the burial customs? In a tomb to be dated perhaps in the late second century A.D. the body of the owner lay extended in a wooden coffin accompanied by at least three other skeletons. In another of similar date it was only too clear that at least one retainer had been carelessly "killed" before being placed in the tomb with his master, only to revive and die of suffocation after the tomb had been sealed up. These are but two of many examples which prove that the ancient custom of human sacrifice which we first saw at Kerma in the Middle Kingdom had returned.

Burial chamber of a late tomb at Meroë. At the right the owner's body lies in the faint traces of a wooden coffin. In the foreground are three sacrificed bodies, one of which appears to have been placed in a half-seated position against the large pottery vessels.



The fall of the Meroitic Kingdom of Kush before invaders from Abyssinia somewhere about A.D. 350 was not the end of the story, though its aftermath is still but scantily documented. JOHN GARSTANG of the University of Liverpool, excavating in and about the



Evidence that human sacrifice was sometimes carelessly carried out: skeleton of a man who collapsed (probably from suffocation) inside the sealed doorway of a late tomb at Meroë. The distorted attitude makes it clear that he was not dead when placed in the tomb.

city of Meroë shortly before World War I, cleared a number of tombs which can now be safely dated to a period after the fall of Meroë. Two pictures taken from his publication *Meroë, City of the Ethiopians* will serve to illustrate the fact that Kushite burial customs continued to revert to their ancient forms. The gravel tumulus now reappeared, and with it burial of the dead upon a funerary bed and not in a coffin. Finally the excavations of W. B. EMERY at the site of Ballana-Qustul on the borders of lower Nubia,² which are of X-Group date (fourth to sixth centuries A.D.), illustrate even more strikingly how the evolution of burial practices had come full circle. These enormous tumuli had been raised over the tombs of local rulers who practiced human sacrifice and were laid to rest in full royal regalia upon funerary biers.

The northern Sudan has many more tumuli yet to be examined. When they are, and when there has been further excavation of provincial cemeteries up and down the country, it should be possible to fill out the picture. We should like, for instance, to learn the cus-

Post-Meroitic tumulus at Meroë covered with small stones to protect it from wind erosion. A burial which may be dated to the fourth or fifth century A.D., after the fall of Meroë, and reminiscent of pre-Napatan types. These two illustrations from Garstang's *Meroë*.



oms of the population of country districts far removed from the sophistication of the capital. As the picture stands today, however, it tends to show that national characteristics are not easily changed. The ancient religious conceptions and immemorial customs of a virile people may be overlaid for a time by dominant foreign influences, but they prevail in the end.

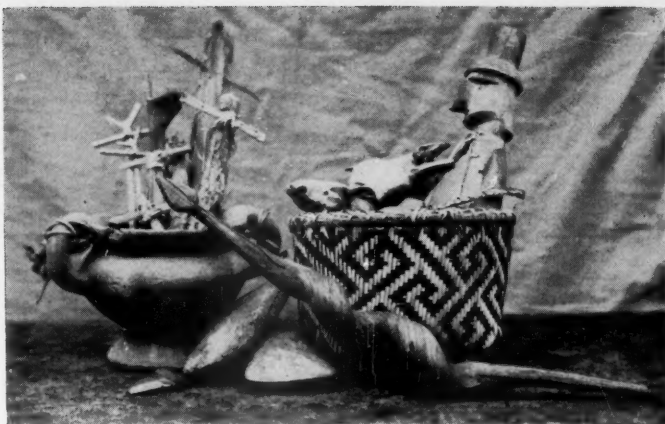
¹ G. A. Reisner, *Excavations at Kerma*, Harvard African Studies V, VI. Peabody Museum of Harvard University, Cambridge 1923.

² *The Royal Tombs of Ballana and Qustul*, Service des Antiquités de l'Égypte, Cairo, 1938.



Funerary bed in the burial chamber of a post-Meroitic tomb at Meroë. The grave had been plundered and the body removed, but this bed is clear evidence for the revival of some earlier native Kushite burial customs.

A few items from a Cuna medicine collection: *uchu mimmi* (medicine idol), *koe pippi macheret* (skull of male dwarf deer), skull of *tias* (otter), *nakkruzes* (crosses to scare away devils), *naikpe* (wooden snake used in obstetrics), *mala akkan* (hand axes), *mala akkan pipplikwa*, *mala machi*, *nia akkan* (shark's tooth).



THE ARCHAEOLOGY OF A MEDICINE BASKET

By Clyde E. Keeler

AMERICAN COME UP MOUNTAIN, WE USE SHOT-guns! said FRANCISCO in Cuna dialect, quoting the minority report of what had transpired at the Council Meeting in his home town of Morti. IGNACIO, the *morale* chanter who dispels sadness, CLAUDIO, the young native missionary of Mula-tupu, and I were ready to climb the jungled Cordillera of San Blas in the morning, and it was lucky that we received this word because fifteen years ago when five foreigners did try it, two came back. The Indians stated specifically that they did not want CLAUDIO with his foreign education.

I told FRANCISCO to inform his people that my only reason for wanting to visit the inhabitants of Morti was to make friends with them and to learn about their way of life, as I had done in towns along the coast. Of course, just to rub it in, I added that I had a white nylon shirt and a red briar pipe for the chief. CLAUDIO said that his great-grandparents had lived in Morti. He wanted to visit for sentimental reasons, and he was bringing metaquinin to distribute to the people because so many in the mountain towns were dying of malaria.

The adverse decision of the Morti minority was very

Professor Keeler's interest in the contents of the medicine basket stems from his work on the genetics of the Indians who collected the objects. Of his studies in this field he writes: "My sixteen years of teaching and research in Medico-genetics at Harvard (1923-39) led in 1942 to the conclusion, verified since then upon rats, doves, fish, mink and other vertebrates, that certain hereditary mutations affecting pigmentation must have slight effects also upon form, function and behavior of some animal species. Did this apply to man? Since the Moon-children of the San Blas Cuna represent the highest incidence of albinism in an inbred tribe in the whole world, I decided to try to apply my findings to them. A grant-in-aid from the Rockefeller Foundation made the study possible." Professor Keeler's study of the Caribe-Cuna Moon-children received the competitive prize of the Association of Southeastern Biologists in 1952. He is now Professor of Biology at Georgia State College for Women.

disappointing to me because I wanted to do a bit of archaeological work at several cemetery sites in the mountains and now I could only inquire about those places. However, I believed that the medicine men who combed the mountains for bark, leaves and herbs could tell me something if they would. Accordingly, I began

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The most powerful of all the Cuna medicine stones, so the disease chanters told me, is the *akwa nusa* or stone mouse. It is a water-worn crystalline stone, topaz in color. It possesses a powerful and beneficial spirit, particularly useful, when accompanied with the appropriate medicine chant, for being sent as far as the eighth layer under our earth to retrieve the spirit of the sick person who lies in his hammock, racked by disease. This is so because diseases are caused by one of countless devils snatching the spirit of the sick one and run-

fifty years, most of them due to fear of the white man, his civilization and his religion. These "fear" migrations followed the arrival of Padre Gasso at Nargana in 1907.



Upikinya, an old medicine man of Ailigandi. He is shown seated with his medicine collection.

ning off with it, down through the earth to his home.

PABLO said he was going to give me a large and highly potent *akwa nusa* that his deceased father had found in the middle of eight concentric circles of little stones that were sitting there reverently worshiping it. PABLO's father had been an important medicine man of Narkana, but even he did not dare to touch the amber-colored eight-ring *akwa nusa* until after he had burned before it his pot of cocoa bean incense and had sung to it the purifying cocoa bean chant. But alas, when PABLO went to get it, the *akwa nusa* had disappeared. He took the full blame, however, saying that he had forgotten to put it in warm water twice a year, and if it is not so cared for, you will come to the medicine basket one day and find it gone.

OLOIKLIPIPILELE sold me an *akwa kwile*, a disc-shaped piece of granite that he had found up the river. He had seen "something in the water jumping, jumping, jumping." When he approached it he found it to be an *akwa kwile* or jumping stone. This special kind of stone is powerful medicine in the field of obstetrics because it makes both mother and baby jump violently during parturition and thus assists the process.

THE NEXT STONE I examined was the dark *akwa wala* or fossilized heart wood of trees that grew in the mountains before the Great Flood which destroyed the earth. It is good for promoting sexual development in boys as well as for curing anaemia in the general population.

At Mulatupu a medicine man brought a *napsa machi* (son of the earth) to show me. It turned out to be a seven-inch section of a fossilized leaf similar to banana, from the Turbo River in Columbia beyond the Atrato. Fossilized stems with buds on them (also called *napsa machi*) were said to come from Carti region and these had medical importance.

The quest had begun to look a bit hopeless when MANIPEKINAPPI, a medicine man of Mulatupu, brought me a polished hand axe of granite. Upon my inquiring what it was, he told me that it was a *mala akan* or sky axe.

"They come from the sky on the tip of a bolt of lightning and you find them at certain places in the mountains along the rivers," he said. "You may stick them into the ground outside your hut during a storm and they will prevent lightning from striking it."

Now I was on the trail at last!
"Just where do you find the *mala akkans*?" I inquired of UPIKINYA of Ailigandi.

"Up the Okop Tiwar (Coconut River) at a place in the forest that we call Naka."

"And do you find many of these *mala akkans*?"

"We find many where the water washes away the clay surface of the earth."

"What else do you find at Naka?"

"Some very fine granite mortar stones upon which we grind our rice come from there, and curiously enough, the round pestle stone is always found sitting on top of the mortar. I found that one over there at Naka," said UPIKINYA, indicating a large granite mortar and pestle standing by the bright cooking fire of his hut.

"The pestle stone is always on the mortar just as it was placed in some ancient grave," I wanted to add.

"And do you find little broken pieces of red pottery at Naka?"

"Yes, of very poor workmanship and decorated by pressing them with the tip of a stick rather than by painting."

"What else?"

"Suli!" (Nothing!)

"But did you not find any of these at Naka?" I asked, drawing a well chipped flint arrowhead from my pocket. I was anxious to know about that because the traditional Cuna arrows are tipped with five sharp barbs of black palm and nobody to whom I had shown the arrowhead knew a name for it or even guessed its purpose.

UPIKINYA fingered the arrowhead thoughtfully for a moment.

"It is a *mala akkan pippikwa* (little sky axe) or a

mala machi (son of the sky), and it is found at Naka. I had one but I cannot locate it, and SOSIPIPI the Medicine Man has one."

PETER MILLER, my erstwhile interpreter, and I went to see SOSIPIPI in his thatched hut, but in vain. His *mala machi* could not be found and the trail came to a disappointing dead end.

Several hours later SOSIPIPI came to the missionary's house with a *mala machi* which turned out to be a shark's tooth, such as the Indians said had been found from time to time at Naka. It appears that they may have been used as arrow tips.

I asked about everything else I could think of and finally learned that once when the river overflowed and washed away much clay from its banks, a woman had found at Naka a number of pieces of hard, red coral with branches, having a hole drilled through each piece. She strung them on a thread and wore them as a necklace, but when I hunted up the woman in order to see them, I found they had been sold.

THIS EXPERIENCE HAS impressed several facts upon me. First of all, it shows that many early archaeological sites must have disappeared because they represented wooden cultures such as that of the early Cuna, contained soft pottery, or employed natural objects such as sharks' teeth. Again, it shows how such sites may be completely exploited and the objects carried away by later peoples for the same purposes (mortar and pestle) or for other purposes (sky axe, shark's tooth). And lastly, I was amazed to learn that only one of the medicine men with whom I talked recognized Naka as the site of a previous civilization, although such eloquent archaeological evidence was speaking from the Cuna medicine baskets.

Coming in ARCHAEOLOGY, Autumn Issue:

Constantinople, 1453—a pictorial review of the city's architectural riches, on the 500th anniversary of its fall, by WILLIAM MACDONALD;

Restoring Pompeii—the method of excavating and preserving this famous city's buildings, by A. W. VAN BUREN;

The Athenian Agora—results of this year's campaign and plans for its unique museum, by H. A. THOMPSON;

Making History at Gordion—the reconstruction from excavated evidence of an unrecorded battle, by RODNEY S. YOUNG;

Philippine Archaeology—a report on activities in a largely unexplored part of the world, by W. G. SOLHEIM II;

as well as an account of the Byzantine Congress at Salonica, other articles, news items and book reviews.

Fig. 1. The springs and marshes of Lerna, legendary haunt of the Hydra. View eastward from Mt. Pontinos, showing houses of Myloi in foreground; the ancient settlement, partly covered by an orchard, at extreme right; the city and citadel of Nauplia on the opposite shore of the bay.



AN EARLY SETTLEMENT AT THE SPRING OF LERNA

By John L. Caskey

Director, American School of Classical Studies at Athens

ON THE WEST SIDE OF THE ARGOLIC GULF IS A beautiful and well favored region, abundantly watered, rich in associations with the mysterious and legendary past. Here, just south of the village of Myloi, is the Lernaean spring. This welling source was known in ancient times as one of the routes down to the House of Hades; the near-by marshes were the haunt of the Hydra slain by Herakles; here Amyclone was loved by Poseidon and Io fled from Zeus.

In September 1952 preliminary soundings were made at the site of an early settlement beside this spring (FIGURE 1). The small low mound that marks the place of the settlement (FIGURE 2) was observed some forty years ago by German archaeologists, and in the neighborhood a few

objects of archaeological interest have been discovered by chance from time to time, but until now no excavation had been carried out. The surface of the earth, partly under cultivation, is strewn with fragments of pottery representing many successive ages and indicating a long series of habitations. Especially plentiful are the evidences of occupation in pre-Mycenaean times

Fig. 2. The low mound of characteristic shape, composed of earth and debris from the ancient settlement at Lerna, as seen from the south.



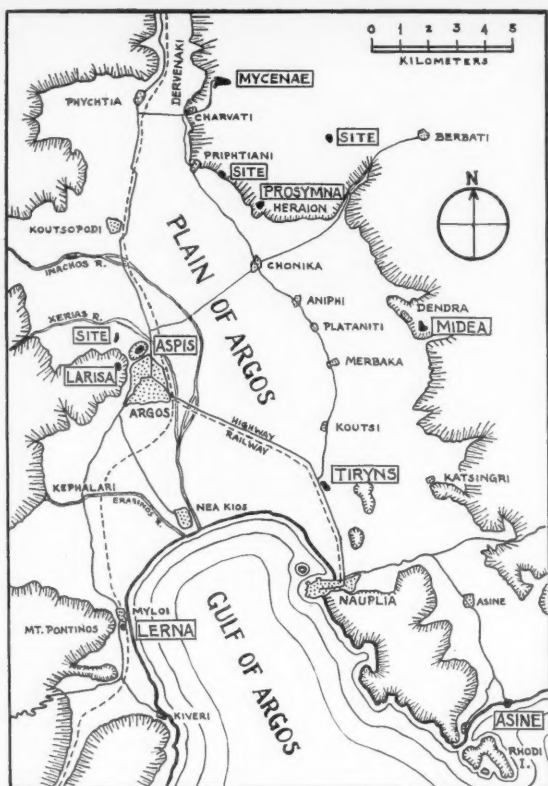


Fig. 3. Simplified map of the Argive plain, showing the principal ancient sites (several of which have not been identified) and some of the modern towns and villages. Beyond the hatched borders the country is hilly or mountainous. (After H. Lehmann, *Argolis I*)

Tiryns, the Larisa and Aspis of Argos, Prosymna, Midea, the town near modern Berbati, and the nearby port of Asine, to mention only a few. One and another of these has been searchingly investigated since the days of SCHLIEMANN, with spectacular and illuminating results. Much, if not most, of our present knowledge of the civilization which we call Mycenaean or Late Helladic (ca. 1600 to 1100 B.C.) is based upon them, and they still hold promise of untold revelations, as was proved most recently at the capital itself [see the discussion of the new shaft graves discovered at Mycenae and their important contents, in *ARCHAEOLOGY* 5 (1952) 194-200].

REMAINS OF HABITATIONS long antedating the Mycenaean age are also plentiful in the Argolid, but of these periods far less is known, partly because they have (quite properly) received less attention from archaeologists in the past, partly because the material evidence of the earlier settlements is lost at many places, having been disturbed and destroyed by the builders of successive palaces and citadels. At the present stage of research an unpretentious village site like the one at Myloi, where generation after generation of inhabitants left its mark in relatively unbroken sequence, may provide a most valuable key to problems of chronology and cultural relations.

The results of the exploratory campaign at Lerna went far to confirm our hopes and expectations. Al-

(before 1600 B.C.), and it was in hope of recovering information about these early periods in particular that the new investigations were undertaken. The work of the first brief campaign, conducted by the American School of Classical Studies at Athens, was limited to four trial pits and trenches, the digging of which was supervised by Mrs. J. L. CASKEY, Miss ALIKI HALEPA, Mr. S. CHARITONIDES of the Greek Archaeological Service, and the author.

Myloi and Nauplia stand on opposite sides of the bay and mark the southwestern and southeastern limits of the fruitful Argive plain, which extends northward to the foot of the pass named Derveniaki (FIGURE 3). One of the most prosperous regions of Greece at all times, this plain fostered many settlements in the Bronze Age: Mycenae and



Fig. 4. Mrs. Caskey directs the excavation of one of the trial pits. Remains of a burnt house have already been removed and a wall of the next earlier phase is beginning to emerge.

though the latest layers appear to have been removed by ploughing and erosion, the pre-Mycenaean deposits are intact to a considerable depth—so deep in fact that it was not possible to reach virgin soil in the trial trenches.

Immediately below the present surface we encountered foundations of house walls and associated floors, assignable on the evidence of the pottery to the Middle Bronze Age (Middle Helladic; early second millennium B.C.). One room had been destroyed by fire and contained numerous cups and jars, broken but restorable. Beneath the ruins of the uppermost houses in most places lay at least three other strata assignable to earlier phases of the Middle Helladic period (FIGURE 4), making a total deposit about three meters thick. Millstones of the type known as saddle querns (FIGURE 5), blades of obsidian, and miscellaneous implements of bronze, bone, horn and terra-cotta occurred in each stratum, and in two trenches graves were found below and among the houses (FIGURE 6). The associated pottery is largely of familiar types: gray, black and yellow Minyan ware (FIGURE 7), vessels with patterns in dull paint on a light ground (FIGURE 8), and coarse domestic wares. Present also are several examples of a polychrome style of decoration—linear motives in white and deep red on a black-glazed surface (FIGURE 9)—which are reminiscent of contemporary Middle Minoan fabrics from Crete.

REMAINS OF THE Early Bronze Age were found below the Middle Helladic layer in all four trenches. At the greater depth it was more difficult to



Fig. 5. Miss Halepa demonstrates the use of a pair of millstones found in a Middle Helladic house.

examine them in detail, but in the debris, as much as two meters deep, two or three successive strata were observed. The bottom of the layer was reached in only one pit. Walls, including one of massive construction, floors, and a hearth lined with potsherds came to light. The pottery and miscellaneous objects recovered are again chiefly of kinds already known, but among them are a terra-cotta figurine of unusual form (FIGURE 10), a lid bearing a pattern of concentric circles in a manner reminiscent of Early Cycladic styles, and a jar with winglike attachments that seems almost certainly to have been imported from Troy. Thus an Early Helladic settlement, which runs well back into the third millennium B.C., is evidently represented by substantial and relatively datable remains at Lerna.

Here and there about the mound, and particularly in the deepest part of one trench below the Early Helladic layer, material of the Late Stone Age was encountered. The few remnants of walls which were exposed in 1952 lay in ruinous condition, but there is no doubt that a fixed settlement existed. Its dates cannot yet be determined; the pottery, comprising monochrome wares and numerous pieces with patterns in dark paint on a light ground, bears an obvious similarity to late Neolithic fabrics from other sites in the Peloponnesos. These are referred provisionally to a period around 3000 B.C. It is quite possible that remains of still earlier date await discovery, since the bottom of the de-



Fig. 6. The upper part of a grave of the Middle Helladic period encroaching on the house walls of an earlier phase. The lower part had been dug away when a railway line was cut through the edge of the mound in 1891-92.



Fig. 7. Stemmed goblet of Minyan shape, mottled black and red in a fire which destroyed the house. Though the edge of the base was lost in antiquity, the vessel was still usable. Early phase of Middle Helladic period.

posit had not been reached when excavation was suspended.

IN THE NEXT campaign, when we hope to resume work on a larger scale, an attempt will be made to clear whole buildings and to test each stratum in various parts of the mound. If time and resources permit, a search will also be made in the environs for tombs and other antiquities. It seems unlikely that we shall find material evidence to shed light on the myth of the Hydra or the other legends of Lerna; and indeed it is better that we should not tamper with the magic of their mystery and illusion. Clearly the natural aspects of the region fired the imagination of men. In the sphere of archaeology it will be our duty to learn as much as possible about the inhabitants of the place, who they were and how they lived.



Fig. 9. Cup found in late Middle Helladic grave. The surface was wholly coated with shiny black glaze, on which were added linear patterns in red and white.



Fig. 8. A fragmentary jug with a cutaway spout, decorated on neck and body with a geometric pattern in dull black paint on a light ground. Middle Helladic period.

Photographs for this article are used by courtesy of the American School of Classical Studies.



Fig. 10. Terra-cotta object, apparently a male figurine, seen from front and side. The body is rectangular and nearly flat, cut square at the top without representation of head or arms. At the lower corners were large feet; heels and one toe are missing. Early Helladic period.



LION AT DIDYMA

By Herbert Hoffmann

A graduate student at Harvard University, Herbert Hoffmann has traveled extensively during the last four summers in Italy, Greece and Turkey. He has been appointed Fellow of the American Academy at Rome for the year 1953-54.

THE HANDSOME LATE ARCHAIC MARBLE LION, reproduced here for the first time, was photographed by the writer two days after it was accidentally unearthed in August 1952 near Didyma on the lower Ionian coast of Turkey. A Turkish peasant digging an irrigation ditch to a cotton field made the discovery. The lion was subsequently removed to the nearby sanctuary of Apollo Didymaios and will probably become part of the fine Izmir Museum collection.

The exact location of the find was 67 feet west of the sacred way of the Branchidae, a mile and a half from Didyma. In antiquity this sacred way linked Miletus with its oracle and sanctuary of Apollo. Like the more famous Via Appia, it was flanked by numerous tombs dating from the archaic period to Roman

times. Several other lions have been found along this ancient road, and, like most of these, our lion was probably associated with a tomb. When I was taken to the site of the discovery and shown the clearly defined imprint of the lion in the clay, 18 inches below the present surface of the ground, I noticed a long narrow marble foundation nearby. Lacking tools and permission to excavate, I was unable to settle for myself the question of whether or not the lion was once part of a funerary group. If and when an excavation of the area is undertaken, it is more than likely that

a second and identical lion will be found, as very similar lions from nearby Halikarnassos, and from Ialysos on the island of Rhodes, were found in pairs flanking the entrances of graves.

The legs, lower jaw and a portion of the tail are missing, making a reconstruction difficult. It seems that the animal was slinking along cautiously, as if about to spring. Its head is turned slightly to the right, its mouth open in a ferocious roar. The mane is rendered in tiers of pointed flame-like locks reminding one of the Chimera of Florence. The broad modeling, combined with a definite tendency to patternize details, points strongly to a date in the first quarter of the fifth century B.C. It might be added that the advanced anatomical treatment shows considerably greater familiarity with the living beast than is evident even in much later lions of Greece proper.



Closer view of lion



Imprint (left, above) of the lion in the ground; (below) a marble foundation in the region where the lion was found.

AN IRON AGE SETTLEMENT IN THE SHETLANDS

By J. R. C. Hamilton

Assistant Inspector of Ancient Monuments for Scotland

In our Winter 1951 issue (pages 218-222) Mr. Hamilton gave an account of the Viking settlement excavated at Jarlshof. Here the story is continued with a report on the village which lay beneath the mediaeval settlement and which was flourishing during the Roman occupation of Britain.



WITH THE EXCAVATION OF A NATIVE SETTLEMENT dating to the first centuries of our era, at Jarlshof in the Shetland Islands, off the northeast coast of Scotland, Britain's Ministry of Works has completed its investigation of one of the most remarkable sites yet discovered in northern Europe.

Near the southernmost tip of the Islands three large villages, buried for centuries beneath a huge mound of sand, have been uncovered. The earliest dates back to the first millennium B.C. when the Islanders were leading a Stone Age existence, though the use of bronze was known elsewhere in Britain; the latest to the coming of the Vikings in the ninth and tenth centuries.

The second or intermediary settlement now under investigation consists of a stone tower or broch and a courtyard within which massive "beehive" huts were

View of the landward arc of the broch courtyard containing a segment of the aisled house (foreground) with two wheelhouses (left and center) and a passage house beyond the encircling wall. Viking house foundations on top of the windblown sand appear in the right background. The aisled house at the bottom appears at the left of the reconstruction drawing on the opposite page.

later erected during the centuries of Roman rule in south Britain. JOHN BRUCE discovered part of this settlement over fifty years ago, but our recent excavations have revealed some entirely new dwellings which have yielded a number of stone implements, bone artifacts and pottery. These throw much light on the everyday life of the villagers, and by studying them we can follow the history of the settlement for some seven hundred years—up to the time of the arrival of the Viking colonists from Norway.

The broch tower was built, like so many others in

these Islands and on the Scottish mainland, when Iron Age immigrants were evolving new ideas in the development of political and tribal power throughout the Highland zone. The broch tower at Jarlshof was built to the seaward of an older Bronze Age settlement. It is thought that, like the famous Mousa Broch, about fifteen miles away, this tower may have been some forty feet high. On the north and west sides of the tower an oval courtyard was constructed. The encircling wall still stands to a height of more than ten feet, and we were able to distinguish the original en-

Throughout the period of Roman rule in Britain the native population continued to lead a tribal existence in the highlands and remoter isles far to the north. In the coastal districts many villages, such as that at Jarlshof, clustered around the ruined broch towers of a former age when unrest was caused along the northern seaboard by successive waves of immigrants, piracy and the slave trade. Within the landward arc of the oval courtyard attached to the Jarlshof broch, about the beginning of our era, a round house was constructed, the encircling wall being somewhat reduced to provide building material. Only a portion of this building remains but many of its features were amazingly well preserved in the windblown sand which eventually overwhelmed the entire village. These include the massive stone piers originally supporting the roof, the radial chambers with wall cupboards and the central curbed hearth. The inhabitants smelted iron but also made use of stone and bone implements. They kept animals, cultivated corn, hunted seal, fished in the tideway off the headland, trapped waterfowl, and burned peat for fuel in much the

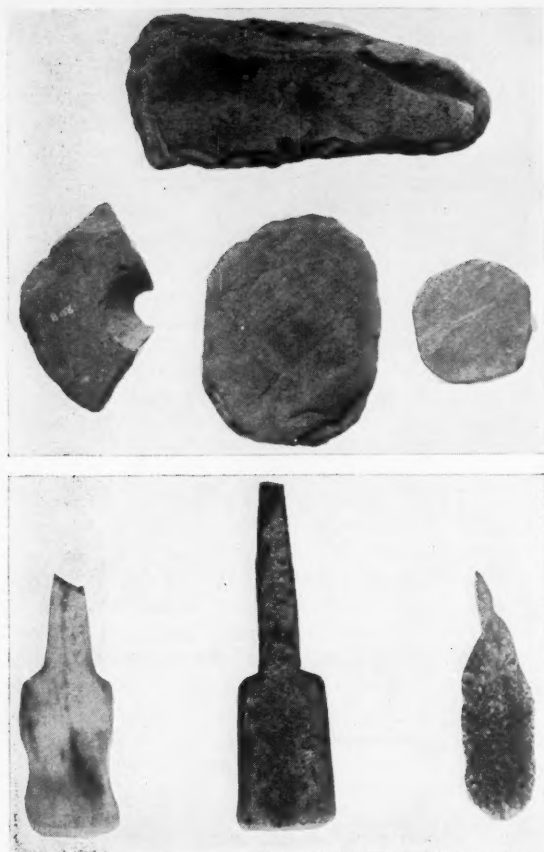
trance of the courtyard and the doorway of the tower, despite much sea erosion.

Our excavations have revealed a new structure. This is a large round house erected within the landward arc of the courtyard, probably not long after the tower and courtyard had been completed. This house originally had a pent roof which provided shelter round a central hearth area. An alternative means of roofing was later adopted. This consisted of large radial piers which supported a roof sloping outwards. These divided the interior into a series of "aisled" compart-

same fashion as the present-day crofters. Later this house was partially demolished to make way for a series of wheelhouses—circular stone huts with solid radial piers. The intervening side chambers were slightly corbeled and roofed with stone slabs and turf ten feet above the floor. Two of these huts, built by newcomers who introduced the rotary quern for the grinding of corn and reorganized the field system on the lower slope, are preserved in the courtyard, the larger example (center) being later contracted as shown owing to the danger of falling masonry from the crumbling and despoiled broch tower. The smaller wheelhouse (foreground) was inserted after considerable clearance of the former round house, its main wall and entrance bursting through the older masonry and blocking the covered alley inside the courtyard wall. These huts remained in use long after a series of passage houses and smaller huts had been built in the windblown sand mounded against the outer walls of the settlement. These later "underground" houses were in occupation when the Vikings came from Norway to the site at the beginning of the ninth century A.D.

Drawn by Alan Sorrell, assisted by J. R. C. Hamilton





Above, slate axe, stone with hour-glass perforation and two stone discs found in the aisled house; below, three bone "spoons" found in the midden scatter associated with the post-broch dwellings of this settlement.

hunted seal on a large scale. Miss PLATT of the Royal Scottish Museum has identified a number of wild birds which the inhabitants trapped for the cooking pot.

Eventually this round house was partly demolished to make way for a large wheelhouse in which the solid radial piers were attached to the main wall rather like the spokes of a wheel. This type of structure was probably introduced by newcomers to the site some time in the second century A.D. These people brought with them from the mainland of Scotland a new type of pottery, hard and well fired. They had a peculiar practice of painting pebbles with natural dyes. One of the patterns—eyebrows with dots—may be associated with the popular practice of tattooing which, according to classical writers, was widespread at this time among these northern tribes. The newcomers also introduced the rotary quern.

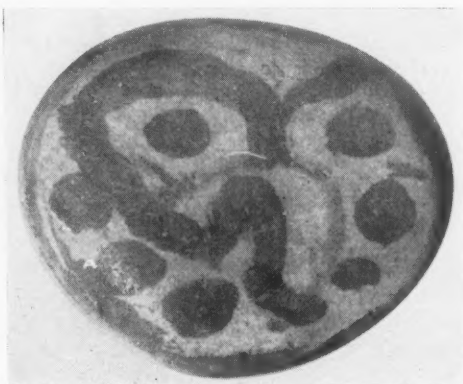
Much later, new wheelhouses were built within the courtyard, one of the latest of these being a small well preserved example inserted in the remaining portion of the old round house.

LARGE QUANTITIES of stone appear to have been plundered from the old broch tower for the building of these later dwellings. The tower became dangerous through deterioration and the inhabitants sealed off the adjacent portion of the large wheelhouse with a partition wall. The only part of this old wheelhouse then occupied was furnished with a large U-shaped hearth. Eventually the broch tower was reduced in height, its facing stones and rubble being thrown down into the abandoned round house.

During the whole period of occupation, the outer walls of the settlement were continually being cloaked by layers of windblown sand swept from the nearby dunes. It

ments. The chamber floors were paved and convenient storage space was provided by a series of cupboards built into the thickness of the house wall.

Among the refuse which covered the floors of these rooms we found a number of slate axes, stone pounders, a whalebone scoop, whalebone tether pegs, a clay spindle whorl and many sherds of large, high-shouldered cooking pots. The inhabitants grew corn on arable land near the settlement. This was ground on saddle-shaped querns. They also kept oxen, pigs, sheep, ponies and a few dogs. They caught fish, mostly ling, in the tideway off the headland, and it is obvious, from the number of bones recovered, that they



Painted quartz pebble bearing an "eyebrow" pattern and dots within a painted border. This was probably made by the newcomers from Scotland who introduced the wheelhouse.

Detail of the large wheelhouse which replaced the aisled structure. This view from a lesser doorway shows one of the radial piers and the upright curved stones fronting a side chamber. The dry masonry has stood up well.

was in this mounded sand that a third class of dwelling was constructed—the so-called passage house. One entered these houses at ground level by a stone stairway or down long sloping passages. These were poor dwellings, a fact that is emphasized by the poor quality of the pottery, a thin degenerate ware somewhat like that found in the "Pictish" huts on the lower slope beneath the Viking farmsteads. It is possible to deduce, from the survival of certain cultural elements into Norse times, that the site was still inhabited by these "native" people in the late eighth or early ninth century A.D., when the Vikings invaded the territory.

It is probable that such settlements in the remote Scottish islands were frequently in continuous occupation down to Viking times. According to one mediaeval chronicler, the Islands were inhabited before the coming of the Norsemen by "Picts who did marvels in the morning and the evening, in building walled towns, but at midday they entirely lost their strength and lurked, through fear, in little underground houses." Indeed, a vivid synopsis of the history of this settlement which has now been revealed by the spade!



One of the circular "Pictish" huts excavated on the lower slope at Jarlshof. At the right foreground can be seen a Viking stone-lined hearth overlying the older foundations.



San Gabriel del Yunque, founded in 1598, as it appears today. The house at right center marks approximately the site of the helmet discovery. This is the structure José Abeyta was building when he found the helmet. Actually the helmet was found a few yards north of the doorway. It was here that the Spanish soldiers' garrison probably stood. The low mounds on which both houses stand are all that remain of the Indian ruin, Yuque-Yunque, and of San Gabriel del Yunque. The Indian settlement at one time extended some distance to the left, as well as where the horses are grazing. The area is now farmed by the Indians of San Juan pueblo. (Photo made by Laura Gilpin for School of American Research)



The Oldest Armor Found in the United States— The San Gabriel del Yunque Helmet

By Marjorie F. Lambert

The author, whose special field of interest is southwestern archaeology, is Curator of Archaeology at the Museum of New Mexico and the School of American Research, as well as Associate in the Department of Anthropology. She has engaged in many field expeditions in the southwestern United States and has written extensively on archaeological subjects.

ALL OF THE UPPER RIO GRANDE VALLEY OF New Mexico is by nature a laboratory of anthropology. Along it, in the region between Santa Fe and Taos, live the Indians, whose ancestors, the most ancient inhabitants of the valley, dotted it with settlements now ruins; the Spanish-Americans, whose forefathers in 1598 founded the first white settlement in this part of the New World; and finally the

Anglo-Americans, who have settled here in increasing numbers since the early nineteenth century. These elements and what they imply have provided a great deal of source material for the archaeologist, the ethnologist and the historian.

Perhaps the most important archaeological-historical find in many years was that made recently by José ABEYTA, who at the time of his discovery headed the

Council of San Juan, an Indian pueblo north of Santa Fe. He found the bowl of a Spanish salade or helmet, which has been judged the most ancient piece of armor in the confines of the United States.

SAN JUAN is near the site of the first capital of New Mexico, founded by Don JUAN DE ONATE in 1598. The remains of his settlement occupy the southwest corner of the ruins of the pueblo of Yuque-Yunque which the Indians had built on the delta formed by the Chama and the Rio Grande. The site lies on the west bank of the river, directly opposite the present-day San Juan. Here ONATE and his men built a mission, San Gabriel del Yunque, as well as quarters for the garrison of soldiers. They occupied it only a short time, however, when the capital was moved to Santa Fe.

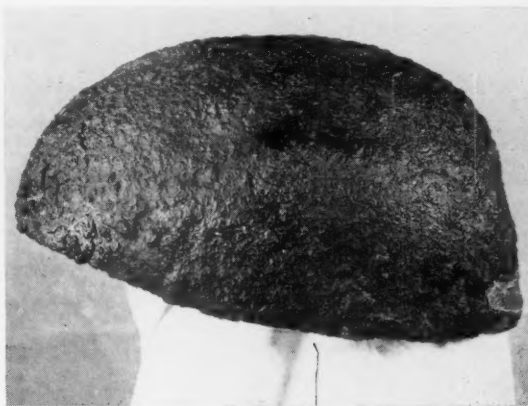
Of ONATE's settlement and the adjoining Indian pueblo almost nothing remains today; for the area, which is rich and fertile, has been cultivated by the Indians for many years, and recently the ruins have suffered extensive damage due to large-scale adobe making. The Museum of New Mexico and School of American Research undertook a small excavation there a few years ago but were not allowed to dig in any part of the area thought to have been occupied by the Spaniards.

The helmet was found under the following circumstances. In the process of building a house for a newly

married daughter, JOSÉ ABEYTA was making adobes in the southwest corner of the site, about where we believe the soldiers' quarters may have stood. While removing dirt from a pit, about four feet deep, he struck and broke a rectangular stone slab which we have identified as a griddle of the type used by both ancient and modern Pueblo Indians for making *piki*, a paper-thin bread. Beneath this was a large, black culinary jar, also broken by ABEYTA's pick. Inside the vessel was the helmet, badly corroded and very fragile. Because it had been buried inverted, water had collected in it for many years and deposited materials which had been carried in solution.

ABEYTA is respected in the pueblo for his wisdom. Nor can we credit him too highly. Puzzled and interested by the curious object which he had just uncovered, he took it at once to HENRY KRAMER, well known resident of the valley and long-time friend of the Indians. KRAMER, in turn, brought the piece of armor to the Archaeology Department of the Museum of New Mexico. We examined the piece and showed it to Dr. ERIK REED, of the Santa Fe branch of the National Park Service. On REED's suggestion, we referred it to Mr. HAROLD L. PETERSON, Chief, Historical Investigations Branch, National Park Service, Washington, D. C. This expert and his associates undertook the delicate preservation of the piece of armor as well as its study and analysis.

According to PETERSON the helmet is the bowl of a



Two views of helmet after treatment and preservation: left, a three-quarter view from above and to the left showing median ridge; right, the left profile. Approximate original measurements were: inside long diameter, $8\frac{3}{4}$ inches; inside short diameter, $6\frac{3}{4}$ inches; circumference around exterior in a plane even with the

base in the frontal region, $25\frac{1}{2}$ inches. The median ridge rose about a quarter inch above the crown at its highest point and was $1\frac{5}{16}$ inches wide at its center, tapering at both ends. Because of the extreme roughness of both the interior and exterior, it was impossible to measure thickness. (Photos by Harold L. Peterson)

close-fitting salade of the type worn by arquebusiers and crossbowmen; it was probably made toward the end of the fifteenth century, or possibly during the first years of the sixteenth century. In all likelihood, it originally had one or two additional plates riveted to the occipital area as a neck defense (some of the rivets and rivet holes may still be seen). That these pieces are missing is due to their having been made of a lighter metal which probably rusted away or somehow became detached. In any case, PETERSON says, such pieces are frequently missing from similar bowls found in otherwise good condition.

That the piece is preserved at all is a miracle, for examinations made by PETERSON and his associates, as well as by RUTHERFORD J. GETTENS, of the Freer Gallery of Art, showed that there was little if any metal left. Almost nothing but iron oxide remains.

At some time the salade had received a hard blow from a large blunt instrument which to some extent flattened the left side and creased the occipital area. One can only wonder how and when the blow came. Was a Spanish soldier's head inside the salade when the blow fell? Was it delivered by an indignant or enraged Indian? Does the burial commemorate the success of the blow, or was evidence purposely hidden by someone fearing reprisal?

There are indications that the helmet was purposely buried. The black culinary vessel, with its contained

helmet, had been deposited very close to an adobe wall, perhaps the foundation of the garrison building. The reasons for its interment there can only be guessed, for there are no signs of human bones in the vicinity. Other related remains are pottery of late sixteenth-century Indian manufacture.

AS A RESULT of analysis and study PETERSON offers the following ideas regarding the helmet (*El Palacio*, September 1952, 286):

"The fact that the date of the manufacture of the helmet is perhaps a century earlier than the establishment of San Gabriel . . . should cause no concern. The men who led such expeditions had to supply much of the equipment themselves in order to obtain the appointment as captain-general and governor of the expedition and conquered territory. They were, therefore, interested in obtaining this material as cheaply as possible and consequently much obsolete equipment was purchased. Also, since armor was relatively scarce in Mexico, pieces that dated back to the early Conquest could well be expected to have seen service until they were completely worn out. Thus there is ample reason for a helmet of 1480-1510 to be found in the site of a settlement of 1598."

PETERSON points out further that only nine specimens of armor worn in America during the sixteenth and seventeenth centuries survive, and that the chances of recovering additional examples are relatively slim. Our helmet, then, becomes one of a highly select group. In addition, the date of its manufacture makes it by far the oldest specimen in this group and hence the earliest fragment of European armor ever found in the continental United States.

Linked to this is another find made a few years before that of ABEYTA by another San Juan Indian, STEPHEN TRUJILLO. He unearthed a fragment of a small church bell, possibly of equal antiquity, in a ploughed field close to the scene of the helmet discovery. This piece has been described by the writer [*New Mexico Historical Review* 21 (1946) 140-148].

Thus have Pueblo Indians, descendants of the Upper Rio Grande Valley's most ancient people, contributed two of the most valuable historic remains ever found in New Mexico. Both the helmet and the church bell fragment are on permanent display in the Palace of the Governors (Museum of New Mexico and School of American Research), Santa Fe. This building itself is also of great historical significance, for it holds the distinction of being the oldest public building in the United States.



German sallet, about 1500 A.D., in the Metropolitan Museum of Art, New York. The New Mexican helmet originally resembled this fine specimen of headgear.

The Clay Monsters of Acambaro

By Charles C. DiPeso

The author is Archaeologist-in-charge at the Amerind Foundation, Inc., at Dragoon, Arizona. His early training was secured at Beloit College and at the Chicago Museum of Natural History. After four years as an army pilot, he became City Archaeologist of Phoenix, Arizona, and studied for the Ph.D. degree at the University of Arizona. Since 1948 he has been connected with the Amerind Foundation and has engaged in excavation and research in northern Mexico as well as in the southern United States.

From the Julsrud collection, a fantastic creature holding a diminutive human female figure.



FOR THE PAST EIGHT YEARS STRANGE STORIES have been whispered about in the railroad town of Acambaro, Guanajuato, Mexico. They concern a haunted hill where it is said the devil has left many odd and terrible clay figurines strewn on the ground as a warning to mortals. Is it any wonder that the natives have placed a crucifix there and cross themselves when near the haunted hill?

The figurines "made by the devil" have been collected by Señor WALDEMAR JULSRUD, a German immigrant who for many years has operated a hardware store on the plaza in Acambaro. A number of articles defend the authenticity of these objects, supposedly the works of prehistoric men who lived at the same time as the large reptiles of the Mesozoic era. Such ar-

ticles always conclude with a challenge that no professional archaeologist would visit the site in order to prove the authenticity of the material or to substantiate the belief that man tamed the dinosaurs. A num-

Defending the authenticity of the Acambaro objects are: WALDEMAR JULSRUD, *Enigmas Del Pasado*, Acambaro, Guanajuato 1947; LOWELL HARMER, "Mexico Finds Give Hint of Lost World," *Los Angeles Times*, March 25, 1951, Part 2, 1-2; WILLIAM N. RUSSELL, "Did Man Tame the Dinosaurs?" *Fate*, February-March 1952, pages 20-27.



Acambaro: the town in the background and, in the foreground, the two workmen at the "dig" on the "haunted" mountain.

ber of sherds were sent for inspection to the Amerind Foundation, Inc., in Dragoon, Arizona. After chemical tests were made, it was decided that I be sent to Mexico to examine the material. At first sight most professional archaeologists would call the material fraudulent, but such spectacular finds must be investigated.

Acambaro is connected with Mexico City by rail and with Morelia, the capital of the state of Michoacan, and Celaya by road, yet it is generally described as a sleepy colonial town off the beaten track of civilization. I found it a thriving agricultural community with a population of some 20,000. It has a theater where American movies can be seen; comic books and newspapers are sold on the streets. Three trains leave daily for Mexico City. These connections with the outside world are important because one of the points raised by adherents of the Acambaro monsters is: "Where would the natives get the idea of modeling dinosaurs and other such weird animal forms?"

MY TRIP to Señor JULSRUD's home in mid-June 1952 was the first professional visit to examine the material in its own locale. I found my host to be a genial dreamer who sincerely believes that his collection of monsters is authentic. His interpretations are unique, and the collection itself, consisting of 32,000

specimens, is amazing. It includes extinct forms like dinosaurs mixed with living animals such as the rhinoceros, horse and cow. I noted that none of the specimens was patinated with earth salts, a condition one would expect to find on long buried specimens. Many hollow forms had unstained interiors. Many of the "pipe" forms were complete, and their long stems with holes of small diameter unchoked with earth. Proof positive,

however, would lie in a thorough examination of the area where the material was excavated. I arranged to watch Señor JULSRUD's employees dig up some of these monsters.

On June 16th the digger, who had been in Señor JULSRUD's employ since the first figurine was found, met me at the home of his employer and led me toward the "haunted" mountain. Where the adobe huts gave way to open corn field, he began pointing out broken bits of figurines lying in our path. A head of a brontosaurus, a tail of a tyrannosaur and an almost complete gorilla were picked up. My guide always anticipated each specimen. Obviously all the sherds had been placed on the ground very recently. In spite of the previous night's rainfall the figurines lay on the surface. They were not even partially covered with earth nor had they formed pocket-molds on the surface save in one case where the plain imprint of a man's foot showed that someone had stepped on the object, forcing it into the earth. Under the magnifying glass the edges of these figurines showed fresh sharp breaks and there was no indication of weathering or patination from exposure or long years underground.

I suggested that we take another path, but my guide insisted we walk along the assigned trail. Three feet off the path figurines were *not* to be found, despite erosion cuts in evidence on both sides of the trail. As we

The cache of figurines and pipe uncovered in the presence of the author. Note that the pipe bowl is not clogged by dirt.

crossed a stone wall my guide stopped and pointed to a recently dug hole containing several fragments of a human skull and jaw. In the midst of this heap lay the head of a "monster." The hole was cut into a stratum of soft white ash but neither the figurine head nor the human bones were coated or stained with the clinging ash.

At the site the digger began work, assisted by his young son. Sitting on the edge of the pit, I noted a long trench, partially refilled, cut at a right angle to the hole where the men were working. The earth was badly mixed and the face of the trench showed that the black earth, about a yard deep, lay directly upon a sterile red layer. I took particular note of the men. Supposedly both had been digging up the figurines for a period of eight years, yet neither had calloused hands. The son developed a blister and the father began to breathe hard. Their tools were two shovels, a pick and a bar. The shovels had crude handmade handles and the blades were covered with cement which could not have been retained

near the biting edge if they had been used daily. The digging technique was abominable. The soft earth of the upper fill readily gave way to hard thrusts, and had any ceramic object been struck, it would most certainly have been scarred. In none of the 32,000 specimens did I note any such breaks or scars.

Actually the men were working in a room of a prehistoric village probably occupied by the Tarascans who lived on the hill near the Lerma River. The diggers uncovered the stone walls of a room some ten feet wide and fourteen feet long. The room was filled with about three feet of earth; the floor was of hard red earth. In the fill of the room the diggers found a broken tripod metate and a number of prehistoric Tarascan sherds and obsidian blades. These sherds were patinated and the broken edges were worn smooth, unlike the figurines that I had seen.

The men were superb actors. I was determined to test their stamina and sat for five hours while they enacted their search. I began to speculate as to where they had planted the cache of figurines that they would most certainly find. In the late after-

Two weird animals which are supposed to have lived at a time when early man knew how to work clay.



noon it began to rain and I excused myself, saying that I would return the next morning.

THE FOLLOWING DAY I took another path to the excavation and found no sherds along it. Save for a few shovelfuls, no earth had been moved since I had left although the father said that he had worked in the late afternoon and all of that morning. Once again I sat on the pit edge and watched. Within an hour, the boy called to his father that he had found some figurines. He pulled a clay pipe from the hole and handed it to me for inspection. Neither the smoke hole in the stem nor the bowl was choked with dirt. There was no patination on the surface and in spite of the rough way in which the pipe was pulled from the ground it was not broken.

I was able to distinguish the tunnel dug in order to plant the cache for, unknowingly, they had cut five inches into the red earth floor of the prehistoric room. In refilling the tunnel not only had the red earth become mixed with the upper stratum of black earth, but ten inches above the cache of figurines there were bits of fresh manure.

Upon removing the fifteen items that had been cached in the hole I observed several more interesting clues. A small bowl was packed with a mixture of black and red earth. The fingerprints of the man who had packed it still remained impressed on the surface! The contents included bits of vegetal material probably

Hollow "instruments" of clay that provided absolutely no evidence of great age.



A weird animal, the product of a native imagination fed by movies and comics.

derived from the fresh dung found above the cache and freshly broken bits of limestone from the walls of the prehistoric room.

On the third morning, June 18th, I climbed the hill to observe the excavation pit from a distance. No one appeared to dig, but there was a great deal of activity around the digger's home. At noon I returned to the home of Señor JULSRUD and an hour later the digger arrived, reporting that he had been waiting for me at the pit all morning and that he had found thirty more pieces.

NOW I FELT that there were sufficient data to proclaim the Acambaro monsters creations of modern men and not prehistoric in any sense. Nevertheless, I felt that I must get the complete story—who made the monsters and why? After talking with various individuals, I found that many realized Señor JULSRUD was the victim of a clever scheme. Prior to 1944 he had purchased various Tarascan items from the ruined town of Chupicuaro. They are authentic and the collection is one to be envied. As a result, some natives in the vicinity conceived the notion of producing spectacular antiques for sale. They may have gotten their ideas from the local cinema, as a number of the objects resemble such creatures as the gorilla, King Kong, holding a woman.

These objects were buried on the "haunted" mountain. Señor JULSRUD was then guided to the spot, where a cache was uncovered. As an eye-witness he became convinced of the great antiquity of the figurines. The digger is undoubtedly associated with the makers and perhaps creates a few himself, as there are several styles. The great bulk of the collection consists of small pieces; a hundred or so are large and well executed.

Our investigation proved conclusively that the figurines are not prehistoric and were not made by a superior prehistoric race that associated with dinosaurs.



ARCHAEOLOGICAL NEWS

Obituaries

Death has recently come to several members of the archaeological profession, whose loss will be regretted:

Dr. BEDRICH HROZNY, the distinguished linguist among whose many notable achievements was the decipherment of the Hittite language (December 19, 1952);

Dr. ELIEZER L. SUKENIK, long active in archaeological work in the Palestinian area and known especially for his studies of the ancient synagogue (February 28, 1953);

GEORGE H. MCFADDEN, for many years excavator at Curium, Cyprus (lost in a sailing accident off the coast of Cyprus, April 19, 1953);

Dr. ALEXANDER A. VASILIEV, the noted historian of the Byzantine Empire (May 30, 1953).

Back Numbers

We wish to thank those members and subscribers who responded to the call for extra copies of the Spring 1951 issue and to report that the stock of this number has been appreciably increased since the appeal was issued. We should like to ask that readers also contribute any extra copies they may have of *ARCHAEOLOGY* Volume 1, Nos. 1 and 2 (Spring and Summer 1948) as supplies of these, especially the former, have almost vanished. Please send them to the *ARCHAEOLOGICAL INSTITUTE OF AMERICA*, Andover Hall, Cambridge 38, Mass.

Summer Schools

Summer sessions have been conducted at the Athens and Rome Schools during the months of July and August. The Director of the Athens session was Professor ROBERT L. SCRANTON of Emory University, who is a member of our Editorial Advisory Board. Professor SCRANTON is to be Visiting Professor at the American School of Clas-

sical Studies at Athens during the year 1953-54 and, as noted elsewhere in these columns, is the recipient of a Guggenheim fellowship for the study of the architecture of mediaeval Corinth.

The Director of the Rome summer school is Professor GEORGE E. DUCKWORTH of Princeton University. Both sessions include lectures and visits to archaeological sites and museums. Each course forms a comprehensive introduction to the history, archaeology and general culture of the country.

Chicago Expedition

The Southwest Archaeological Expedition of the Chicago Natural History Museum is again in the field, under the direction of Dr. PAUL S. MARTIN, chief curator of anthropology. Dr. JOHN B. RINALDO, museum archaeologist, will be principal assistant. The site of the season's excavations is Pine Lawn Valley [see *ARCHAEOLOGY* 5 (1952) 14-21], a mountainous area of west central New Mexico near the town of Reserve.

The present project is Dr. MARTIN's nineteenth in a series of expeditions to the Southwest, and this is the tenth year in which work has centered on sites in New Mexico; in earlier years work was concentrated in the southwestern region of Colorado. The excavations and concurrent research that are being conducted have for their objective the collecting of more artifacts and skeletons of the prehistoric Mogollon Indians who inhabited the area from about 2500 B.C. to about A.D. 1350 when they mysteriously disappeared. From the results of the previous expeditions, Dr. MARTIN and his associates have pieced together much of the nearly 4,000 years' history of the Mogollons, but there are still great uncertainties about the beginning and end of their era as well as wide gaps in between.

New Editor for *AJA*

The appointment of Professor RICHARD STILLWELL as Editor of the *AMERICAN JOURNAL OF ARCHAEOLOGY* has been announced by the *ARCHAEOLOGICAL INSTITUTE OF AMERICA*. He will succeed Mr. ASHTON SANBORN at the beginning of 1954. Professor STILLWELL, who is a member of the faculty of the School of Architecture of Princeton University, was for many years associated with the American School of Classical Studies at Athens. From 1932 to 1935 he was Director of the School. Professor STILLWELL is the author of many books and articles and is particularly well known for his work on the sites of Antioch and Corinth. His latest publication is *Corinth, The Theatre*.

Guggenheim Grants

For the year 1953-54 the Guggenheim Foundation has announced 191 awards, of which thirteen are given for research in archaeology and allied fields. They are as follows:

MARION E. BLAKE. Studies of the mosaic pavements of Roman Italy.

GEORGE H. FORSYTH, JR., University of Michigan. Studies of Palaeochristian architecture.

KURT VON FRITZ, Columbia University. Studies of the development of Greek historiography.

ROBERT M. GRANT, University of Chicago. Studies in the history of early Christian thought.

ETA HARICH-SCHNEIDER. Studies of Japanese mediaeval music.

WILLIAM H. P. HATCH, Episcopal Theological School, Cambridge, Massachusetts. Textual studies of Greek manuscripts of the New Testament.

ERNST KITZINGER, Dumbarton Oaks Research Library of Harvard University. Studies in the history of Early Christian and Byzantine arts.

MABEL L. LANG, Bryn Mawr College. Study of changing standards of weights

and measures throughout Athenian history.

EDWARD H. SCHAFER, University of California. Study of the history of Chinese civilization in mediaeval times.

ROBERT L. SCRANTON, Emory University. Study of the architectural development of mediaeval Corinth in Greece.

EDWIN D. THATCHER. Studies of ancient Roman methods of heating houses by warm air flowing in ducts.

ROBERT L. VAN NICE, Dumbarton Oaks Research Library of Harvard University. Studies of the structure of Hagia Sophia in Istanbul.

ARTHUR F. WRIGHT, Stanford University. Study of the Sui Dynasty in China, 589-617 A.D.



Stone Carvings of Hawaii

Petroglyphs, or stone carvings, have been found deep in caves and other out-of-the-way places in the Hawaiian Islands. These images are mostly of men, women and dogs. They were cut or pounded by the ancient artist on the surface of comparatively soft rocks, using a harder piece of stone as a tool. They are found on all the islands.

What do these figures mean? Who fashioned them, and when? These questions are still waiting to be answered. One theory is that, since the ancient Hawaiians did not have a written language, these rock images were an at-

tempt to convey messages. However, this is discounted by some because of the relatively long time that must have been required to form the message. What does seem probable is that these petroglyphs were more than mere decoration. They were almost certainly of some mystical significance. Their location points to this view. In almost all instances, the images are found in relatively inaccessible places—the backs of caverns, in narrow passages between outcroppings of lava rock, in sea-level caves that at times were filled with water. It is as if the ancient artist were attempting to hide his work from the sight of the casual observer.

Some of these carvings, such as the one shown here (the figure at the left probably represents a woman in childbirth—Ed.), are found in the vicinity of what is now the Nuuanu Cemetery at Honolulu. This is the area where the legendary "ghost Dog of Nuuanu" had his lair. Stories about this strange creature, whose appearance is supposed to portend disaster, have persisted over the years.

Beyond their artistic interest, these pictographs are important because they show the original Hawaiian dog, "Ilio," a creature that is now extinct. Two skulls have been found, both preserved in the Bishop Museum in Honolulu, but the only evidence of what the complete animal looked like is contained in the rock carvings.

Realizing the importance of these links with Hawaii's remote past, archaeologists and ethnologists hope that official action may be taken to protect these petroglyphs from the vandalism which they have suffered in the past.

Princeton Plans

Professor ERIK SJÖQVIST of Princeton University informs us that his summer plans involve an extensive trip which will take him to Italy, Sicily, Turkey, Syria and the Cyrenaica. The object is to find a possible site for excavation by Princeton University. In the course of his travels Professor SJÖQVIST will visit the Uppsala University expedition which is excavating at Labranda in Asia Minor, under the direction of Dr. GÖSTA SAFLUND.

American Research Center in Egypt

The new Director of the Center in Egypt for the year 1953-54 is ARTHUR

JEFFERY, Professor of Semitic Languages at Columbia University, who has had wide experience in the Near East. With Professor JEFFERY's interest in Islamic studies and the oriental churches the Center considerably broadens its basis since its two previous directors in Cairo have been Egyptologists. Professor and Mrs. JEFFERY will arrive in Cairo in June and take up residence at no. 12, sharia Sultan Hussein.

Hotu Skull in Washington

A cast of the Hotu skull—the skull of an Amazonlike woman cave-dweller who lived in Iran during the last ice age—has been acquired by the Smithsonian Institution. The original was collected two years ago by Dr. CARLETON COON, of the University of Pennsylvania. Located under three levels of glacial gravel, the skull was believed to represent the earliest known member of the true human race, as distinguished from the earlier grotesque Neanderthal men and also from the much later Cro-Magnon race.

After carefully reconstructing the skull and making casts for the leading anthropological collections, including that of the Smithsonian, Dr. COON returned it to Iran. The reconstruction of the skull has made possible several probably valid conjectures about the woman's appearance. She was taller, stronger and slenderer even than Norwegian women of today. The vault of her skull was about 100 cubic centimeters larger than the average of 1325 cubic centimeters for modern women.

With this skull Dr. COON found several others less well preserved but obviously belonging to individuals of the same race. It can be assumed that these people lived on the edge of retreating glaciers during one of the retreats of the last ice age. Presumably they were primitive hunters and food gatherers, as were the earliest known inhabitants of North America.

Norton Lecturer

The Charles Eliot Norton Lecturer of the ARCHAEOLOGICAL INSTITUTE OF AMERICA, for the year 1953-54, is Dr. GEORGE E. MYLONAS, Professor of Classical Archaeology at Washington University, St. Louis, Missouri. A graduate of Smyrna College, he has re-

ceived the Ph.D. degree both from the University of Athens and from the Johns Hopkins University. He is widely known as an eminent scholar and archaeologist in the field of preclassical Greek civilization, and has been most recently associated with the spectacular Grave Circle newly discovered just outside the walls of Mycenae [ARCHAEOLOGY 5 (1952) 194-200], with its rich shaft graves. This summer, in continued collaboration with the Greek Archaeological Service, he will explore several more graves in the Circle which have been located but not yet excavated. Members of the INSTITUTE will look forward to Dr. MYLONAS' lectures, in which he will be able to present discoveries of the Mycenaean period unrivaled since the days of SCHLIEMANN.

AAUW Fellowships

Among the numerous fellowships awarded by the American Association of University Women for the year 1953-54, six were granted for research

in archaeology or history of art.

LILLIAN M. CRAMER, graduate student at Radcliffe College, will study the origin and development of marginal decorations in Gothic illuminated manuscripts, with the aim of establishing stylistic criteria for dating and placing manuscripts of doubtful origin;

ERIKA DOBERER, University of Vienna, will continue study of the road-lands of churches in Germany, Switzerland, Italy and England;

BERTHA P. DUTTON, of the Museum of New Mexico, will conduct field research in Mexico and Guatemala to determine the place of manufacture of plumbate pottery, a widely distributed form of Middle American pottery which serves to link chronologically the cultures of that area;

JOSEPHINE M. HARRIS, of Wilson College, will travel to France and Egypt to study Coptic architectural sculpture and its relation to other Early Christian sculpture;

GLORIA S. LIVERMORE, graduate stu-

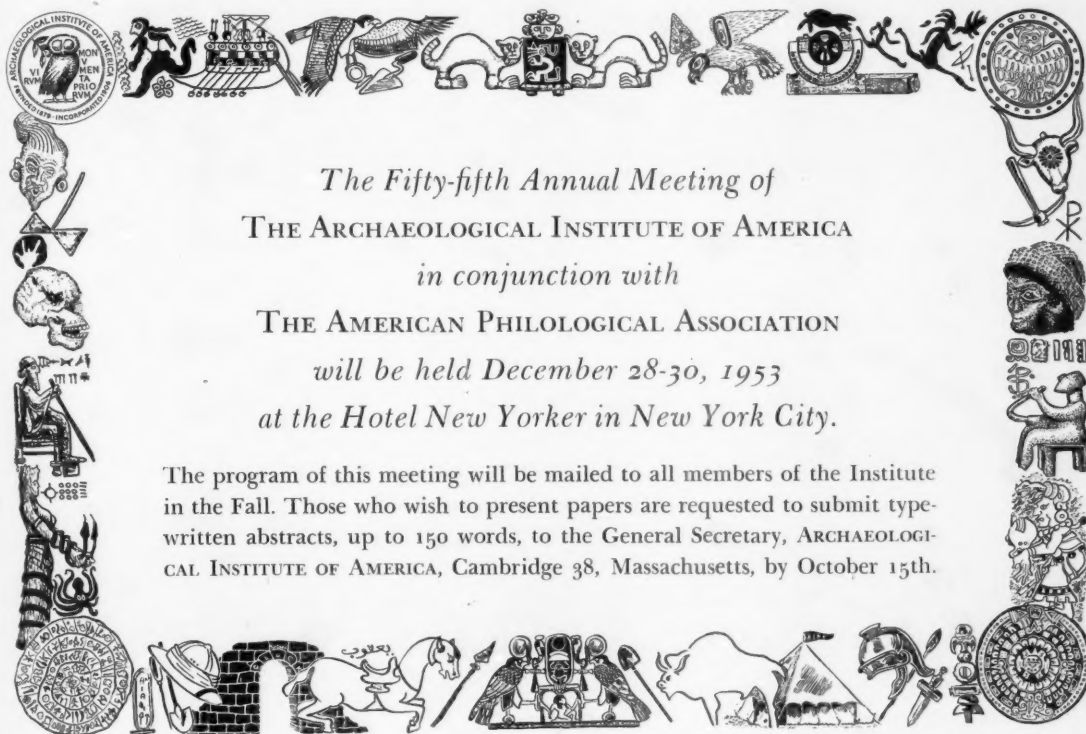
dent at Radcliffe College, will make a study of the building program conducted in Athens during the Hellenistic period;

MARIA H. VELTE, University of Basle, will study classical elements in the Gothic sculpture of France.

Galapagos Expedition

The first discovery of archaeological remains in the Galapagos Islands, on the equator 600 miles west of the South American mainland, was made last winter by the Norwegian Archaeological Expedition to the Galapagos, organized and led by THOR HEYERDAHL, accompanied by ARNE SKJOLSVOLD of the University of Oslo and ERIK K. REED of Santa Fe, New Mexico. Potsherds of pre-Spanish types from the mainland, representing different periods of coastal Ecuador and north Peru, were found at several camp-site locations which evidently were occasionally or repeatedly used by groups of Indians coming to the islands on balsa

Drawing by J. Glück



The Fifty-fifth Annual Meeting of
THE ARCHAEOLOGICAL INSTITUTE OF AMERICA
in conjunction with
THE AMERICAN PHILOLOGICAL ASSOCIATION
will be held December 28-30, 1953
at the Hotel New Yorker in New York City.

The program of this meeting will be mailed to all members of the Institute in the Fall. Those who wish to present papers are requested to submit type-written abstracts, up to 150 words, to the General Secretary, ARCHAEOLOGICAL INSTITUTE OF AMERICA, Cambridge 38, Massachusetts, by October 15th.

rafts for short visits. No structures, statues or other conspicuous remains indicating long-continued occupation were found. The islands were uninhabited when first discovered by the Spaniards about 1535, and it has hitherto been assumed that no archaeological material was to be found in the Galapagos.

Exploration in Turkey and Iraq

The American Schools of Oriental Research, which have participated during the past spring in the immensely successful excavation of ancient Jericho, are planning new enterprises for the summer and fall-winter seasons. They are applying to the officials of the Turkish Government for permission to undertake a preliminary survey and soundings at the Tomb of Antiochus I, King of Commagene, on Nimrud Dag in southeastern Turkey [see *ARCHAEOLOGY* 5 (1952) 136-144]. The work contemplated there is to be under the supervision of Miss THERESA GOELL, for many years assistant to Dr. HETTY GOLDMAN at Tarsus, and it will be supported in part by a grant from the Bollingen Foundation.

In the fall and winter the American

Schools of Oriental Research will join with the Oriental Institute of the University of Chicago in the further excavation of Nippur in Iraq, Sacred City of the Sumerians [see *ARCHAEOLOGY* 5 (1952) 70-75]. The work at Nippur will be under the direction of Dr. DONALD E. McCOWN of the Oriental Institute, while Dr. THORKILD JACOBSEN of the same institution and Dr. VAUGHN CRAWFORD of Yale University will represent the American Schools on the staff.

Fulbright Grants

Announcement has been made of the competition for Fulbright awards for university lecturing and post-doctoral research for the year 1954-55. Awards are available for the following countries: Austria, Belgium and Luxembourg, Denmark, Egypt, Finland, France, Germany, Greece, Iraq, Italy, Japan, Netherlands, Norway, Pakistan, Sweden, United Kingdom and Colonial Dependencies. Application forms and additional information may be obtained from the Conference Board of Associated Research Councils, Committee on International Exchange of Persons,

2101 Constitution Avenue, Washington 25, D. C. The closing date for submission of applications is October 15, 1953.

ESAF Meeting

It is announced that the annual meeting of the Eastern States Archeological Federation will be held Friday and Saturday, November 6 and 7 at the Rochester Museum of Arts and Sciences, Rochester, N. Y. The officers of the Federation are: President, WILLIAM A. RITCHIE, New York State Museum, Albany, N. Y.; Treasurer, JAMES L. SWAUGER, Carnegie Museum, Pittsburgh, Pa.; Recording Secretary, DOROTHY CROSS; Corresponding Secretary, KATHRYN B. GREYWACZ, both of the New Jersey State Museum, Trenton, N. J.

Change of Address

With the mailing of each issue of *ARCHAEOLOGY*, we learn of subscribers who have moved; we learn this from the undelivered copies returned to us. Please send notice of new address, including postal zone, to *ARCHAEOLOGY*, Andover Hall, Cambridge 38, Massachusetts.

The Society for the Promotion of Hellenic Studies (founded 1879)

The Society for the Promotion of Roman Studies (founded 1910)

The Societies were founded to promote knowledge of the Hellenic and Roman worlds, their archaeology, art and history.

Each Society holds quarterly meetings and publishes a *Journal* containing well-illustrated contributions of great importance to research, and reviews of recent publications. They also maintain, jointly, a Library of some 25,000 books.

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For particulars apply to the Secretary of the appropriate Society,

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BRIEF NOTICES OF RECENT BOOKS

Troy in the Third Millennium

Troy. The Third, Fourth and Fifth Settlements, by CARL W. BLEGEN, JOHN L. CASKEY and MARION RAWSON. Part 1: text; xxii, 325 pages. Part 2: plates; xxiii pages, 318 figures. Princeton University Press, Princeton 1951 \$36.00

The second volume of the publication of the Cincinnati excavation at Troy directed by Professor CARL W. BLEGEN will be received with enthusiasm by the scholarly world. It is on a par with the first volume and satisfies the high expectations of the student of the Aegean area. Professor BLEGEN and his associates are again to be congratulated for a difficult and exacting project being carried to completion in magnificent fashion.

Gradually the picture of Troy emerges in all its details and the problems raised by SCHLIEMANN's excavations find their solution. The second volume contains the description and discussion of the remains of Troy III, IV and V and takes the reader to the end of the Early Bronze Age. The importance of these remains fully justifies the detailed treatment given. The Troy publication will be their permanent record and the source to which students of the prehistoric era will in years to come find the exact information needed for their research. And it is the duty of the excavator to put down every detail he has observed and verified in a way that will prove useful not only to his contemporaries but to coming generations of scholars. This principle is followed by our authors. We cannot anticipate the problems which will develop, but we can record faithfully in the final publication the evidence in all its detail, even if that seems boring and superfluous at the moment. In the study of problems developed since SCHLIEMANN, TSOUNTAS and EVANS how many of us have not wished for a few

more details and for more information now that we cannot go back to the sites which they explored!

The conclusions reached by the authors are clear and definite. The Early Bronze Age of Troy is an era of great length and relatively slow progress. It is represented by an accumulation averaging 12 m. in depth, and in this five layers or settlements and thirty phases can be distinguished. The culture represented by this accumulation presents no break in continuity, no abrupt abandonment of established customs and traditions. The same tribe lived on the hill throughout the Age. Settlements III, IV and V, that form the subject matter of the volume, belong to that Early Bronze Age and chronologically have been equated with the latter part of the Early Helladic period of the Mainland of Greece. Settlement III is equated with "the step from EH II to EH III"; settlement IV is considered as "contemporary with some late but not the very last phase of the EH"; and Troy V appears "to have been concurrent with the close of the EH III period on the Helladic mainland." Again it is apparent that the end of the Early Bronze Age of Troy was brought to an end when Troy V was overwhelmed by invaders who brought with them a culture of their own and the horse, established themselves on the hill and built the sixth settlement.

The remains of these three settlements are described and discussed in a masterful and complete manner and are illustrated by excellent photographs and drawings. Their interrelation, stratigraphic and stylistic, is established and indicated by numerous tables which will prove of great importance. The relations of the site to other sites in the Aegean area and in Anatolia are scrutinized with most satisfying results. The expert assistance obtained from

scholars in fields adjacent to that of archaeology has enabled the authors to round out the picture of the life of the Early Bronze Age settlers of Troy. Thus we learn that deer were abundant in the area during the period of Troy III and IV but became rather scarce in Troy V when the *bos* and the *sus* rise to "their maximum proportional incidence."

The elements which characterize the settlements are basically the same but small differences do exist. Thus architectural improvements are noticeable in Troy V, and the orderliness and spacious planning of its houses contrasts with the careless and littered aspect of the houses of Troy III and IV. It is pointed out that the people of the fourth settlement in the building of their houses reverted to the technique that prevailed in Troy II. To this we may add that, following the customs of Troy II, they also dug "bothroi" in the floors of their houses, a custom that seems to have been abandoned by the settlers of Troy III. The use of those bothroi as storage pits is established by the examples found in settlement IV and thus another thorny question of an Early Helladic architectural element has been answered at Troy. We may also suggest that the "large stopper-like object of clay found on the floor of an oven of phase IVa," (No. 33-361 fig. 150, p. 116) originally served as a leg to a vase-stand of a zoomorphic shape perhaps similar to those found at Aghios Kosmas [*AJA* 38 (1934) fig. 20]. If that suggestion proves correct then in it we may have another element of contact with the outside world.

It is impossible here adequately to summarize the evidence and conclusions contained in this monumental volume. It will suffice to state that it leaves nothing to be desired and that it will become a landmark in scientific

presentation and publication of an excavation. It was fortunate that one of the most famous sites of the Aegean world was destined to be investigated again by an expedition whose technical skill and expert leadership can hardly be surpassed. The Troy publication is a monumental work of which American scholarship can be proud.

GEORGE E. MYLONAS
Washington University

Greek Vase Painting

The Development of Attic Black-figure, by J. D. BEAZLEY. xiv, 127 pages, 49 plates. University of California Press, Berkeley 1951 (Sather Classical Lectures, 24) \$6.50

Sir JOHN BEAZLEY is undoubtedly the leading authority and the most prolific writer of this century on Attic vase-painting. While his major concern has been the red-figured technique, he has also studied vase painters who worked in the earlier black-figured style and in the preface of this work he announces that his large work on *Attic Black-figure Vase-painters*, a companion volume to his classic *Attic Red-figure Vase-painters*, is well along. Once before Professor BEAZLEY gave a general survey of the Attic black-figure fabric, *Attic Black-figure: A Sketch*, a lecture before the British Academy in 1928. Now he offers a more detailed synopsis of the history of Attic Black-figure. The published text is almost exactly as delivered; the lucid language, the delightful thumb-nail sketches of characters and scenes, the succinct characterizations of the styles of various painters, so typical of Sir JOHN's writing, make this pleasant reading.

The background is laid by discussing "The Road to Black-figure," giving first a definition of this style in silhouette with engraved details and added red and white paint, which seems to have been invented at Corinth shortly before 700 B.C., then presenting a brief historical sketch of Attic vase-painting down to the rise of its black-figure style in the late seventh century. Attic superiority, first gained in the Proto-geometric period, continued through the Geometric period to the end of the eighth century. Then the so-called Protoattic style, already under oriental influence at the end of this century, de-

veloped a gay and vigorous style through the seventh century and finally, in the last decades, settled into the standard black-figured technique, losing some of its freshness and spontaneity.

The personalities and styles of individual painters emerge almost at once, the first being the Nessos painter of the late seventh century. The early sixth-century artists—the Gorgon painter, Sophilos who carried on his tradition, the painters of the Komast cups and of the Siana cups, many of them still quite Corinthianizing—lead the way to the François Vase, that great product of the potter Ergotimos and the painter Kleitias. A chapter is devoted to a full description of this wonderful volute-krater. At this point, and again in many later sections, one cannot help but feel that more illustration is needed. Obviously, many more were used at the lecture. Quantity has been sacrificed for size; although the forty-nine plates contain 125 excellent illustrations of whole vases and details, additional illustrations are imperative for intelligent reading of the text.

A largeness of style and gravity of tone, which point to Exekias, began in the second quarter of the sixth century with Nearchos and Lydos, but the miniature style of Kleitias was continued by the Heidelberg painter, specializing in Siana cups and by the painters of the Little Master cups. In the mid-sixth century, the high point of the black-figured style was reached in the vases of Exekias, whose style is austere, whose characters have breeding and the simple grace of contemporary sculpture. But it was possibly a pupil of Exekias, the Andokides painter, who invented the red-figured technique and thereby sealed the doom of the earlier method. He was himself an excellent artist in black-figure as well as in red-figure, as was his contemporary Psiax. Respectable work was still being done in the late sixth century by the Antimenes painter and the painters of the Leagros group. The technique lingered on to the mid-fifth century, mostly on small vases, with the one important exception of the Panathenaic amphora. In a final chapter on this series of prize amphorae, BEAZLEY traces their development from the earliest Burgon amphora, of about 566 B.C., to the final demise of the shape in the late Hellen-

istic period, using this as a device for recapitulating the history of the development of Attic black-figure.

SAUL S. WEINBERG
University of Missouri

Two Cities of North Africa

Timgad, Antique Thamugadi, by CHRISTIAN COURTOIS. 104 pages, 66 illustrations, 2 maps. Gouvernement Général de l'Algérie, Algiers 1951

Tiddis, Antique Castellum Tidditanorum, by ANDRÉ BERTHIER. 56 pages, 33 illustrations, 1 map. Gouvernement Général de l'Algérie, Algiers 1951

To anyone who has tramped for hours in the vast thyme-scented acres of Timgad, it is rather a shock to be reminded (or perhaps learn for the first time) that Timgad was not a major city of Roman North Africa. It is with this sane perspective that M. COURTOIS prefaces his guide to the ancient Thamugadi.

In a brief historical resumé he traces the development of Timgad from its beginnings, possibly as a provisional camp for the III Augustan Legion, through its rapid growth into a small city for retired veterans from the permanent camp of nearby Lambaesis. Timgad was not a great cultural center, but it had its thermae, theater, public library (proudly erected at the expense of a private citizen), and many of its houses and public buildings were paved with beautiful mosaics.

It is this everyday character that M. COURTOIS presents to the "leisurely" tourist. His tour is well organized—first along the main street and thence through the various quarters of the city and its suburbs. The itinerary contains little not already familiar to the student of Roman and Christian archaeology. The remarks are limited to the essentials, and these as well as the photographs are well related to the two large plans of the town. M. COURTOIS assigns dates with caution, giving none or only the most general except where more exact ones are attested by inscriptions. He never forgets his intention to make this a tourist's guide, albeit for the informed and serious tourist, not the casual visitor.

Some of the photographs are relatively recent and all are quite clear and

effective. There are a striking air view of the whole site and the first published photographs, so far as I know, of a Christian chapel recently excavated in the Byzantine fortress. Wisely included are a few plans of representative or important buildings. Charming additions are a drawing of the Capitol by the eighteenth-century traveler, BRUCE, and a watercolor and a drawing by the nineteenth-century excavator, DELAMARE.

Less familiar and much less spectacular than Timgad is Tiddis, the site described by M. BERTHIER. Castellum Tidditanorum, as its ancient name indicates, was a camp, one of the fortified villages surrounding "Colonia Cirta" (now Constantine) in eastern Algeria. It perched on and spilled over a plateau near the "gorges du Khreneg." Unlike Timgad it did not suffer complete eclipse and so bears evidences of the civilizations which, from neolithic times to the present day, have dominated North Africa.

The layout of the town was affected by the terrain and the problem of the

water supply. Perhaps the lack of a well integrated plan has affected M. BERTHIER's presentation, for it is a bit difficult to get started on his tour. But once on the twisting inclined street which served as the *cardo*, one can proceed with ease along the plateau from the great gate, between a Mithraeum and a Christian chapel, to the terraces dominated by the forum and finally down the hill to the suburbs. Among the more unusual and picturesque features of Tiddis are the numerous natural grottoes which seem to have inspired the followers of Mithras (and his cult was strong among the soldiers) to establish many sanctuaries.

M. BERTHIER has not written a guide book, as M. COURTOIS has, but rather a synthesis of excavation and other specialized reports. It is illustrated with many, though not always too informative, photographs and a plan of the town, but unfortunately none of individual buildings.

Judging from the identical covers and format, these books must form part of a series being published by the Al-

gerian government. If so, it is rather disconcerting to find lack of uniformity in both presentation and mechanical details. But they are attractive contributions, and it is to be hoped that many more will follow, particularly of the less known sites like Tiddis.

—M. A. A.

Anniversary at Trier

Aus der Schatzkammer des antiken Trier, neue Forschungen und Ausgrabungen. 132 pages, 29 plates (9 in color). Paulinus Verlag, Trier 1951 DM 34.50

One of the most interesting towns of the Rhine district, Trier has a long and eventful history to which Romans, Franks, Goths and others have contributed their share. The material remains of each occupation offer a well-nigh inexhaustible field for excavation and study. Nor has such research been lacking, as this volume reminds us, for it has been issued on the occasion of the 150th anniversary of the *Gesellschaft fuer nuetzliche Forschungen* (So-

THE MEDIAEVAL ACADEMY OF AMERICA

was founded in Boston in 1925 and incorporated under the laws of the Commonwealth of Massachusetts "to conduct, encourage, promote and support research, publication, and instruction in mediaeval records, literature, languages, arts, archaeology, history, philosophy, science, life and all other aspects of mediaeval civilization by publications, by research, and by such other means as may be desirable, and to hold property for such purpose." Membership in the Academy is open to all persons interested in mediaeval studies.

SPECULUM, published quarterly since 1926 by the Mediaeval Academy of America, presents articles and reviews concerned with mediaeval architecture, armor, fine arts, geography, heraldry, law, literature, music, numismatics, philosophy, science, and social and economic institutions of the Middle Ages.

THE MEDIAEVAL ACADEMY OF AMERICA

1430 MASSACHUSETTS AVENUE, CAMBRIDGE 38, MASSACHUSETTS

ciety for Useful Research), which was formed in 1801 by fifteen citizens of Trier.

In honor of this anniversary the Rheinische Landesmuseum of Trier has published this volume, containing eight articles by as many authors. Although they are not connected with each other, all the articles concern various archaeological aspects of the region. WOLFGANG DEHN describes bronze jewelry of the Urnfield period from a cremation burial near Erzen. HANS EIDEN publishes a magnificent glass goblet in *diatreta* technique, found in a Late Roman sarcophagus in Niederemmel on the Moselle; later in the volume he describes (with four color plates) a most interesting Late Roman mosaic found in Trier itself. ANDREAS ALFOELDI discusses certain aspects of the well known Roman cameo in the Trier Library. Some Late Roman paintings found in Trier Cathedral are treated by THEODOR K. KEMPF, with five color plates. HARALD VON PETRIKOVITS discusses "The Survival of Roman towns on the Rhine and Danube in the Middle Ages," and KURT BOEHNER "The Question of the continuity between antiquity and the Middle Ages as reflected by the Frankish finds of the Rhineland." The last article, by HANS EICHLER and ERICH GOSE, describes an interesting gold goblet, made in the year 1732, which is studded with ancient gold coins of many varieties.

The appearance of the volume itself should not be overlooked—its clear type, its excellent photographic reproductions and its nine color plates of high quality make handling the book a pleasure. The fifteen worthy citizens who formed the Society would have been gratified at this offering.

—G. D. W.

Roman Wall Painting

Masters of Campanian Painting, by MABEL M. GABRIEL. viii, 68 pages, 34 plates, frontispiece. H. Bittner and Co., New York 1952 \$12.00

The artists of Pompeii and Herculaneum have hitherto been neglected as individuals. Their works have generally been associated with MAU's four styles of decoration, which often have little to do with the inserted pictures and are not necessarily to be accepted

as a valid account of the development of Pompeian wall-decoration. Where the paintings have been studied as such, they have been discussed for the most part either in relation to supposed originals in Greek and Hellenistic art or as modifications of sculptural motifs, or else from the viewpoint of figure composition alone. This emphasis on iconography or on distinctions between flat and three-dimensional composition has its value; but it tells us little about the personalities of the painters. On the other hand, the few attempts that have been made to attribute paintings on the basis of style have generally suffered from failure to examine carefully the technical idiosyncrasies revealed in each picture. Subjective first impressions have been accepted without scientific critical observation.

Miss GABRIEL, however, has recapitulated with considerable success the personalities of three Campanian painters and their assistants. Not everyone will share her belief that some of the works are "as great as any produced by the early Renaissance," but the paintings are undoubtedly outstanding products of ancient art. The artists' names are unknown to us; the author has christened two of them descriptively *The Tragic Master* and *The Baroque Master*; the first of the three is called simply *The Herculaneum Master*.

The method of analysis is one which has been used effectively by BERENSON in his studies of Italian Renaissance painting and, with modifications, by BEAZLEY for Greek vase-painting. By painstaking examination of the color and lighting of a painting, of brushwork, details and peculiarities of forms, of modeling and composition we can determine the technical characteristics of a painter and, through them, recognize other works by his hand. The framing and surrounding decoration may also be of importance.

Six paintings are attributed to the Herculaneum Master and his assistant, the Medea Painter. The greater artist's work is marked by a monumental, sculptural quality and expert use of the shades and combinations permitted by a palette close to the four colors of Pliny. The style of the assistant tends to be flat and linear. Smaller figures are found in the works of the Tragic Mas-

ter and more attention is paid to background; this artist was less influenced by sculpture and worked in a two-dimensional painting tradition. The author finds in him a great capacity for tragic expression. His color is gay and light, delighting in contrasts, "with a translucency akin to water color." Criticism of the Baroque Master is based on a single painting, *Dionysus discovering Ariadne*, from the House of the Citharist. The lack of material, however, is balanced by the writer's enthusiasm for the artist. He is marked by *joie de vivre*, warmth rather than cold classical formalism, and uses "soft colors like those of a sea shell."

The analysis and the description of the peculiarities of the painter are excellent. They do not always offer easy reading, of course; the listing of details of drawing and color inevitably has the quality of a catalogue. But the observations are clearly those of one who is herself a painter. Unfortunately it is sometimes a troublesome task to verify these observations; excellent as the plates are, they would be far more useful as separate plates in a folder. A welcome addition would be at least one color plate; the occasional color plates found in other publications add considerable weight to Miss GABRIEL's analyses. Color would be especially valuable in letting us know what drapery is like that "seems made of all the colors of the sea on a misty day." Such criticisms, ungracious in ordinary circumstances, are justified in the case of a book so expensively produced. One further comment may be added: the ordinary reader would surely prefer that the descriptions of the paintings preceded the analyses. If the reader knows the paintings well enough to proceed immediately to the analyses, the descriptions are hardly needed.

So far as I know, *Masters of Campanian Painting* is a pioneer publication in this neglected field. Much work remains to be done, and it is a hopeful sign that the need to study the paintings as paintings, not merely as parts of a decorative scheme, has come to be realized by Pompeian scholars. An unpublished dissertation by L. RICHARDSON, JR. (Yale, 1952), for instance, presents a similar investigation of the painters of the House of the Dioscuri. His study actually coincides in part

with that of Miss GABRIEL; for one of the painters of the House of the Dioscuri is the Tragic Master. The fact that each writer ascribes to this painter works not mentioned by the other and that in the dissertation he is called the Marco Lucrezio Painter shows that we need more extended study, wider publication of the results, and, as RICHARDSON states, a complete cataloguing of attributions. Only then can the individualities and importance of these anonymous painters be properly estimated.

CHRISTOPHER M. DAWSON
Yale University

Final Olynthus Volume

Excavations at Olynthus. Part 14: Terra Cottas, Lamps and Coins found in 1934 and 1938, by DAVID M. ROBINSON. xx, 533 pages, 174 plates, frontispiece in color. The Johns Hopkins University Press, Baltimore 1952 (The Johns Hopkins University Studies in Archaeology, No. 39) \$25.00

This last volume in the publication of the excavations of Olynthus contains over 500 terra cottas, 182 lamps and over 600 coins found in the last campaigns. It is among the largest of the volumes and correspondingly expensive—which is a pity, for it should be within the reach of everyone interested in Greek archaeology. The material includes not only that found at Olynthus itself, but much from the port-town, Mecyberna, which was inhabited longer and therefore provides the later history of minor arts in Macedonia. In general the types are similar to those previously published, but details are varied and much is added.

As has frequently been noted, Olynthus provides invaluable evidence for the chronology of Greek minor arts. In view of their great historical significance, it is disappointing to find in this, as in other volumes of this series, no attempt to clarify the phases of development within the town itself. The concordances suggest that it would have been possible to determine from the contexts observed during excavation the trend of development in the types and styles of the terra cottas and lamps, and even their absolute chronology where coins were also found. The dates given in this book are not

based upon evidence derived from contexts, at least so far as the reader can make out. A diligent scholar might be tempted to reconstruct the contexts from the abundant data offered in the concordances, but he will be distressed by the fact that stratigraphic levels are not indicated. He cannot be sure that the coins or lamps from one room of a given house were found in significant juxtaposition with the figurines. Such associations can actually be noted only by the excavator during the digging and no number of lists and records can be relied upon to take the place of autopsy. We should like very much to know, for instance, how long the "archaic" masks and seated "goddesses" were popular. If we consider the bulk of the pottery found during the same campaigns, as published in volume 13, we note that, aside from small quantities found in the graves and in a few pre-Persian deposits, almost all is clearly of fourth-century manufacture. It is probable, therefore, that the bulk of the terra cottas, whatever their stylistic affinities, are also to be dated in the first half of the fourth century. Parallels from the excavations in Athens and in Corinth support this hypothesis.

To the general reader the remarkably close artistic ties between Olynthus and Athens are of especial interest. The pottery has already indicated how strong was Attic influence in this northern outpost of civilization. The survey in this volume of terra cottas found elsewhere in the north serves to emphasize the high quality of the figurines of Olynthus and, even more, how much they owe to Athens. That this inspiration was drawn from imports is clear in the case of figures of actors and of some plastic vases. Other, apparently non-Attic, types of head-vases, which are among the finest pieces from the site, seem to indicate other connections, of which we should like to know more. Indeed, among provincial terra cottas those from Olynthus stand high and deserve more adequate reproduction without resort to the trimming which has inevitably confused the outlines with an aura of ectoplasm.

This book, then, serves best as an index to the rich storehouse of original material now in the Saloniki museum. Like all archaeological indices, it is

subject to criticism but nevertheless plays an invaluable part in making available new primary sources to students of Greek life and art.

DOROTHY BURR THOMPSON
Princeton, New Jersey

Vikings in America

The Lost Discovery. Uncovering the Track of the Vikings in America, by FREDERICK J. POHL. 346 pages, 16 figures. W. W. Norton & Co., New York 1952 \$3.75

Mr. POHL's book is by far the best published commentary on the Norse discovery of America. Like most writers on this subject, he locates the Vinland of the Norsemen on the south shore of New England. But POHL goes farther than that. He has identified the exact spots which the commanders of the three expeditions, Leif Erikson, Thorwald Erikson and Thorfin Karlson, chose for their homes. With these facts established, everything else in the records about the discovery of America falls logically into place.

POHL locates Leif Erikson's camp on the shore of Follin's Pond on Cape Cod, Thorwald's homestead on Mount Desert Island on the Maine coast. I have no hesitancy in endorsing POHL's conclusions because these are the only locations on the Atlantic seaboard that conform to the description in the Sagas. He believes Thorfin's headquarters were on the Hudson River near its mouth. I locate it more specifically on Harlem River, a true Norwegian fjord. In either case the first attempted settlement by white men in America was on Manhattan Island.

POHL describes in detail three large boulders, each with a chiseled hole in it, which he thinks important proof that Leif Erikson's camp was on the shore of Follin's Pond. It may well be that these boulders were used as piers by the Norsemen, but there are many similar stones (which POHL mentions) on the shore of the lake.

But those mooring stones are unnecessary in proving the location of Leif's camp. The old precolumbian report on the Norse discovery of America, preserved in *Flatey Book*, describes the location in detail. It was on a small lake at the head of a short but navigable river which issued upon a

shallow sound with a coastline, facing south, running east and west. Nowhere along the entire Atlantic coastline, from Manhattan Island to and around Nova Scotia and the Gaspé peninsula to Quebec, do we find these topographic details in one assemblage except at Bass River and its sea front. The case is therefore fully proven without mooring stones. Some readers will probably be surprised to hear of a navigable river on the Cape Cod peninsula; it is really an inlet of the sea which looks like a river, several hundred feet wide.

POHL's commentary on Leif's first landing place after leaving Markland is somewhat confusing. As the explorers found dew on the grass after landing they appear to have passed Cape Cod in the darkness, and the first land they saw in the morning was Folger Hill on Nantucket Island. The old Saga says they sailed between an island and a cape which ran northward from the land. The cape is the long point extending northward from Nantucket Island, but there is no island. POHL therefore assumes that Great Point, the end of the cape, was then an island because its neck is sometimes covered with water at high tide when the wind is from the northeast. As the voyagers were sailing with just such a wind, he assumes they sailed over the neck inside Great Point. This is highly improbable because the waves would break with great force over this shallow neck. POHL therefore seems to think that the reference to "the cape that ran north from the land" was a later reminiscence of Cape Cod as a whole.

This will not do because the Saga is explicit about the sailing between the cape and the island into a shallow sound. What is needed is an island north of the cape, and such an island was formerly in existence. Some time before 1694 Captain CYPRIAN SOUTHWACK was commissioned by the British and Colonial governments to survey the waters off the coast of Massachusetts. SOUTHWACK's chart of 1696 shows a large island, named Old Rose and Crown, between the Great Point of Nantucket and Monomoy Point. This island is marked "dry" on the map. On later maps a shoal, called Handkerchief Shoal, is shown at the same place. A copy of the atlas containing this and

other charts (London 1734) is in the Library of Congress. After passing westward between the cape and the island to the north of it, as the Saga says, the explorers would see a string of islands to the south. But to the north they would see a continuous coastline, and they therefore turned northward until they stranded on the shoal outside Bass River.

POHL deals mainly with eleventh-century voyages, but he also briefly discusses the Kensington Stone dated 1362 and the Newport Tower. He is convinced of the authenticity of the former and presents good evidence that the Tower was built before English colonists came to Rhode Island.

It would have been well if he had ended his presentation with these subjects, but he has added a chapter on the so-called Zeno voyages. He accepts them as fully historical and gives them an energetic but fallacious defense. It is not difficult to prove that this yarn of NICOLÒ ZENO was written to rehabilitate the names of two ancestors who, dissatisfied with the limitations of patrician poverty, had cast their lot with the infamous Vitalian pirates to gain their share of filthy lucre.

POHL's book is not without some errors, but with the exception of his faith in the Zeno hoax these are not important. On the whole his book is an excellent presentation, very well written, and will go far in enlightening the public on precolumbian American history.

HJALMAR R. HOLAND

Ephraim, Wisconsin

Caves in New Mexico

Mogollon Cultural Continuity and Change: The Stratigraphic Analysis of Tularosa and Cordova Caves, by PAUL S. MARTIN, JOHN B. RINALDO, ELAINE BLUHM, HUGH C. CUTLER and ROGER GRANGE, JR. 528 pages, 179 figures, 4 tables. Chicago Natural History Museum, Chicago 1952 (Fieldiana: Anthropology, Volume 40) \$8.00

This volume is a thoroughgoing report on the excavation, by Dr. MARTIN and his associates, of two caves in west central New Mexico. The work, executed in 1950 and 1951, represents a continuation of a long-term project of the Chicago Natural History Museum for archaeological investigations in this

region. Prior to the two caves here reported they had confined their attentions to open sites.

In addition to supplying additional materials of varieties already known, the caves yielded a wealth of material of an organic nature. Furthermore, the deep stratified deposits, primarily in Tularosa Cave, provided an opportunity to check and verify the chronology for the area which had been previously established by these researchers on the basis of typology. The organic materials made possible radiocarbon dating to give absolute dates to some points on the relative chronology.

The report itself is profusely illustrated with photographs, sketches, and tables. Following physical descriptions of the caves and the manner of their excavation, there are sections, each by an associate author, on the pottery, stone and bone artifacts, cordage, textiles and clothing, wooden artifacts, and plant materials.

In the interpretive portions of the report, Dr. MARTIN, a partisan of the Mogollon as a distinct cultural entity, further elucidates his position. He suggests that the pre-ceramic, pre-agricultural levels of the caves perhaps are representative of a simple food-gathering culture which once covered the Great Basin, the Southwest and Texas. In later levels a number of traits seem to appear earlier in the Mogollon than in the Anasazi culture to the north. Two possibilities present themselves: either that these originated in the Mogollon and were transmitted to the Anasazi, or that they originated elsewhere, possibly to the south, and were transmitted through the Mogollon to the Anasazi. This second possibility is especially brought to the fore in the consideration of certain supposedly ceremonial aspects. Here Dr. MARTIN seems to believe that the Mogollon and the Hohokam culture (to the west) served to pass on ideas from Mexico to the Anasazi peoples of the north; among these last the ceremonial traits subsequently underwent a greater elaboration than they had received en route.

This thoughtful and complete study of these cave sites represents a welcome addition to the ever-growing literature on the Mogollon.

ROBERT F. G. SPIER

University of Missouri

Odysseus Sails Again

Return to Ithaca, by EYVIND JOHNSON. x, 474 pages. Thames and Hudson, London and New York [1952] \$4.00

The average Homerist will probably greet with little enthusiasm the announcement that the *Odyssey* has been "retold as a modern novel." In spite of the efforts of scores of writers during the last 2500 years to create new treatments of the Troy story, very little has been produced which threatens to turn attention more than momentarily from the earliest *Odyssey* of them all. JOHNSON'S achievement, however, in *Return to Ithaca* seems to me of a very high order. His book can be read with interest and pleasure by anyone looking for a good story well told, and, more remarkably, the reader intimately familiar with Homer can find an especial interest and pleasure in it. In one important respect the pleasure which readers familiar with Homer will get from *Return to Ithaca* is, I think, quite like the pleasure which Homer's first audience got from his poem: the two books create the same sort of suspense. We know the general course which the story must take, but we keep wondering how the author will handle the various episodes and characters and just which ones of the many possible episodes he will treat in detail and which he will scant or omit. As I fancy Homer must have done, JOHNSON has modified the "tradition" by selection, addition and shifts of emphasis, but the general story is still the same, and we have the same basic cast of characters. Too many post-Homeric attempts to retell the Troy story have been dull, and some of the contemporary American treatments seem to be based on the assumption that the only way to give life to these old characters and events is to make them more or less ridiculous. JOHNSON has avoided such tricks as the rather patronizing humor of ERSKINE'S *Helen of Troy* and the deliberate anachronisms of MORLEY'S *Trojan Horse*, but he has not fallen into the dull and somewhat pompous proximity of LAURA RIDING'S *Trojan Ending*. He treats his material seriously (actually there is probably less humor than in the *Odyssey*), but he has kept much of the fascination of the fine old tale.

Structurally, *Return to Ithaca* is

quite closely modeled on the *Odyssey*. It begins at the same point in time and like the *Odyssey* shifts the scene from place to place; throughout most of the book, in fact, each chapter opens in a setting different from the last. The proportion of the story dealing with events after the return is considerably less in JOHNSON, since somewhat more than three-fourths of his book is over before the Phaeacians bring Odysseus to Ithaca. Some scenes are closely modeled on Homer. The episode with Phemius, Penelope and Telemachus in pages 170-171, for instance, is almost a paraphrase of the scene in *Odyssey* 1.325-365, but this technique is unusual and most of the episodes are extensively reworked. Most of the characters are still recognizable, although some have undergone metamorphosis. In general, the modified personages obey the law which seems to govern Homeric changelings and are much decayed from their Homeric splendor. Nestor, for example, is a senile forgetful babbler with watery myopic eyes and a dirty beard. His only serious interests seem to be drinking and collecting the Mycenaean equivalent of early American glass. In the larger aspects of style, the most un-Homeric feature is a generous use of description, with the result, of course, that much of the book lacks the *Odyssey*'s swiftness of movement.

I cannot judge the fidelity of the translator (M. A. MICHAEL) to the Swedish original, but on the whole the version reads well. MICHAEL has an unfortunate fondness for the collocation "like when" ("... the giants ... speared them on long forks like when men fish for tunny with harpoons"); page 98 has an ungrammatical "whomever"; there are a number of instances of what someone (JAMES THURBER?) has called the plethoric perfect ("He would have liked to have hit back ..."); on page 169 the translator seems to think that the phrase "under the weather" means "drunk."

FREDERICK M. COMBELLACK
University of Oregon

Documents from North Africa

Tablettes Albertini. Actes privés de l'époque Vandale (Fin du V^e siècle). CHRISTIAN COURTOIS, LOUIS LESCHI, CHARLES PERRAT and CHARLES SAU-

MAGNE, editors. 2 vols. viii, 345 pages, 48 plates, tables. Arts et Métiers Graphiques (Gouvernement Général de l'Algérie, Direction de l'Intérieur et des Beaux Arts) Paris 1952

The unusual documents which are henceforth to be known as "les tablettes Albertini" came to light in 1928. The natives who offered them for sale apparently found them on the border of Tunisia and Algeria some seventy miles south of Tebessa. The introduction to this edition of them pays tribute to the persevering scholarship with which EUGÈNE ALBERTINI worked on them until his death in 1941.

The task of interpreting them was then taken up by the four men whose names appear on the title page. COURTOIS wrote the introduction and the interesting fourth chapter, "People and Things"; PERRAT did the palaeography, LESCHI the linguistics, and SAUMAGNE the law. P. J. MINICONI also worked on the linguistics; his name is not on the title page simply because he joined the group late.

Although the results are not spectacular from any point of view, it was well worth the trouble to give these texts this devoted and definitive edition. The texts would equal a dozen or so Teubner pages. They are written in ink on wooden tablets, mostly cedar. They can be dated exactly, all belonging to the years 493-496 A.D.

The physical form is interesting and is well shown by the plates. The language, too, is interesting, although it is essentially what we have supposed the Latin of the period to be. Readers who are familiar only with classical Latin will enjoy reading some of the texts with the help of the notes. Especially interesting is the fact that we have the original (and reliably dated) handwriting to study. PERRAT'S treatment of it is detailed; there are, for example, eight pages of facsimiles of the 145 kinds of ligatures.

One tablet contains a dowry contract, one the sale of a slave (white, about six years old, sound of wind and limb, no bad habits). The others deal with the transfer of small parcels of land, a very special kind of parcels, for they were called *culturae mancipianae*. They were the rough or uncultivated sections mentioned in the great inscriptions of the imperial estates,

those pieces of land which "according to the *lex Manciana*" could be put under cultivation by those who wanted to work them.

Here they appear as parcels of land within a *private* estate. This possibility was envisaged by the wording of the famous inscriptions. The "owners" of the parcels had acquired a title to them by putting them under cultivation which could be alienated independently of the owner of the whole estate which surrounded the parcels. In these texts we learn the name of the owner of the whole estate, for it is given as part of the description of the parcels of land, but legally he appears only as an onlooker while the title to these *culturæ manciannæ* is changing hands.

On pages 135-142 SAUMAGNE gives a clear account of the rise of this system, which really started with Vespasian's efforts to gather in every penny which might help to restore the finances of the state. The general reader will be interested to learn of this ingenious method of increasing production and revenue. The historian will note that SAUMAGNE ranges himself with those who would explain the workings of the African imperial estates mostly on the basis of local conditions and recent history and that he is not generous with acknowledgments in this matter.

A good way to start using the book is to browse awhile in the elaborate and useful indices. Of themselves they are fascinating and they lead efficiently to the many different kinds of information in the book.

RICHARD M. HAYWOOD
*University College
New York University*

Exploration Under the Sea

The Silent World, by Captain J. Y. COUSTEAU with FRÉDÉRIC DUMAS. xiv, 266 pages, 64 plates (16 in color).

Harper & Brothers, New York 1953
\$4.00

Underwater research and exploration promises to become one of the most exciting developments of archaeology in our times. Heretofore, finds from the sea have contributed greatly to our knowledge of the art and life of the ancient Greek world. Wrecks were accidentally located and explored at Antikythera, Artemision, Mahdia, the Côte d'Azur of southern France and north-west Italy [see *ARCHAEOLOGY* 1 (1948) 179-185]. An isolated statue was fished out of the waters of Marathon in 1925 [see *ARCHAEOLOGY* 2 (1949) 121-123] and the site of ancient Helike, in the bottom of the Corinthian gulf, was established by French archaeologists in 1950.

Technical limitations, however, have made impossible the exploration of these wrecks and submerged sites in the meticulous, scientific manner of excavations on land. The archaeologist, not versed in matters of the sea, has to depend on professional helmet-divers who are interested in finding treasures and are anxious to avoid long stays in deep waters; their air hose ties them to a spot and their awkward and heavy gear imperils their efficiency, which they try to supplement with imagination. In September of 1952, during the investigation of the sea floor of Artemision by the Washington University Expedition and the Greek Archaeological Service, we realized how frustrating that experience can be.

Because of these limitations archaeologists have failed in almost every case to obtain the preserved evidence, and isolated works of art have been brought out of the sea maimed and often incomplete, wrenched from the mud and other objects among which they were securely wedged. The process followed in the exploration of wrecks would be

unthinkable in an excavation on land, and yet in the sea it was the only possible one.

Thanks to the work of French pioneers, this process is no longer necessary; their work has opened up the sea to leisurely and scientific investigation; and this applies not only to its archaeological remains but also to the life it contains. In the present volume this dramatic and real conquest of the sea is described in a fascinating manner. We read of the development of the art of modern diving where a man is no longer tied down to a boat and a hose through which he receives air, but can move freely, at will, like a fish. We read of the discovery and development of the aqualung, of the early experimental dives, and can follow step by step the gradual development of confidence and ability and the progressive investigation of the depths of the sea and its contents. The wonders of the deep, the appearance and habits of its denizens, the problems connected with its conquest are described in an exciting manner. The ability to stop to investigate and study without fear or limitations is the most striking development of the work of the successors of the mythical Proteus, "the old man of the sea." The archaeologist wearing COUSTEAU's apparatus can now study a wreck or a submerged site, map his campaign and proceed in a manner similar to that employed in the excavation of a site on land.

The narrative, as developed by the authors, is absorbing and instructive. It is illustrated by 103 photographs, 20 of exceptional interest, taken in color under water. This book, which will remain a classic of its kind, is required reading for every archaeologist and student of life in general.

GEORGE E. MYLONAS
Washington University

The new headpiece for "Brief Notices of Recent Books" was drawn by MARIAN WELKER

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NEW BOOKS

Selected at the editorial offices from various sources, including bibliographical publications, publishers' announcements, and books received. Prices have not been confirmed.

BENSON, JACK L. *Die Geschichte der Korinthischen Vasen*. 142 pages, 2 figures, 12 plates. Benno Schwabe & Co., Basel 1953

BLEGEN, C. W., J. L. CASKEY and M. RAWSON. *Troy*. Volume 3: The Sixth Settlement. Part 1: xxix, 418 pages; part 2: xxxv pages, 512 figures. Princeton University Press, Princeton 1953 \$36.00

BRAIDWOOD, LINDA. *Digging beyond the Tigris*. xii, 297 pages, 56 figures. Henry Schuman, New York 1953 \$4.50

BURLAND, C. A. *Magic Books from Mexico*. 31 pages, 16 color plates. Penguin Books, Baltimore 1953 \$0.95

CATON-THOMPSON, G., and E. W. GARDNER. *Kharga Oasis in Prehistory*. xx, 213 pages, 128 plates, 38 figures. University of London, Athlone Press, London 1952 £3 10s.

*COUSTEAU, Captain J. Y., with FRÉDÉRIC DUMAS. *The Silent World*. xiv, 266 pages, 64 plates (16 in color). Harper & Brothers, New York 1953 \$4.00

DRIVER, G. R., and JOHN C. MILES, translators and editors. *The Babylonian Laws*. Volume 1: Legal Commentary. xxxi, 517 pages. Clarendon Press, Oxford 1952 50s.

ELWIN, VERRIER. *The Tribal Art of Middle India*. 214 pages, 229 figures. Oxford University Press, New York 1952 \$7.50

FORSYTH, GEORGE H., JR. *The Church of St. Martin at Angers*. 264 pages, 96 plates; portfolio of 16 plates of plans. Princeton University Press, Princeton 1953 \$35.00

FOX, AILEEN, and others. *Roman Exeter (Isca Dumnoniorum): Excavations in the War-Damaged Areas 1945-1947*. xvi, 104 pages, 25 plates, 19 text figures. Manchester University Press, Manchester, England 30s.

GRAY, BASIL. *Early Chinese Pottery*. (Faber Monograph on Pottery and Porcelain) 100 plates (4 in color). 1952 £1.10.0

HAWKES, J. and C. *Prehistoric Britain*. xvi, 280 pages, 30 figures, 23 plates. Harvard University Press, Cambridge 1953 \$3.50

HUXLEY, MICHAEL, editor. *The Root of Europe: Studies in the Diffusion of Greek Culture*. xi, 112 pages, illustrated, 17 maps. Oxford University Press, New York 1952

IRWIN, WILLIAM A. *The Old Testament: Keystone of Human Culture*. xiii, 293 pages. Henry Schuman, New York 1953 \$4.00

JESSUP, RONALD. *Anglo-Saxon Jewellery*. 148 pages, 11 figures, 40 plates (4 in color). Frederick A. Praeger, New York 1953 \$7.50

LEAKE, CHAUNCEY D. *The Old Egyptian Medical Papyri*. ix, 108 pages. University of Kansas Press, Lawrence 1952 \$2.00

LEHMANN, PHYLLIS W. *Roman Wall Paintings from Boscoreale in the Metropolitan Museum of Art*. xv, 230 pages, 81 figures, 42 plates. Archaeological Institute of America, Cambridge 1953 \$12.00

MACE, DAVID R. *Hebrew Marriage: A Sociological Study*. xvi, 271 pages. Philosophical Library, New York 1953 \$6.00

*Reviewed in this issue.

MAIURI, AMEDEO (STUART GILBERT, translator). *Roman Painting*. 155 pages, 84 color plates. Skira, New York 1953 \$15.00

MARINGER, JOHANNES, and HANS-GEORG BANDI. *Art in the Ice Age*. 168 pages, 216 plates (21 in color). Frederick A. Praeger, New York 1953 \$12.50

Mediaeval Studies, 14 (1952). 275 pages. The Pontifical Institute of Mediaeval Studies, Toronto \$7.00

MYRES, JOHN L. *Geographical History in Greek Lands*. xii, 381 pages, 13 figures, 12 plates. Clarendon Press, Oxford 1953 \$6.00

NEEDLER, WINIFRED, and J. W. GRAHAM. *Jewellery in the Ancient World*. 36 pages, 15 figures, 16 plates. University of Toronto, Toronto 1953 (Bulletin of the Royal Ontario Museum of Archaeology, No. 20)

RADIN, PAUL. *The World of Primitive Man*. xi, 370 pages. Henry Schuman, New York 1953 \$5.00

REDFIELD, ROBERT. *The Primitive World and its Transformations*. xiii, 185 pages. Cornell University Press, Ithaca 1953 \$3.50

REED, ERIK K. *Archaeology and History of Guam*. v, 133 pages, 22 plates, 3 maps. National Park Service, U.S. Department of the Interior, Washington, D.C. 1952

RIEU, E. V., translator. *The Four Gospels: A New Translation from the Greek*. xxxiii, 250 pages. Penguin Books, Baltimore 1953 \$1.95 (Paper-bound \$0.65)

RUMPF, ANDREAS. *Archäologie I: Einleitung, Historischer Überblick*. 143 pages, 6 figures, 12 plates. Walter de Gruyter & Co., Berlin 1953 (Sammlung Götschen, Volume 538) DM 2.40

SALIN, ED. *La Civilisation Mérovingienne d'après les Sépultures, les Textes et le Laboratoire*. Volume 2: *Les Sépultures*. 417 pages, 160 figures, 10 plates. Paris 1953 (\$9.00)

SALMI, MARIO. *La Basilica di San Salvatore di Spoleto*. 85 pages, 48 plates, 23 figures. Olschki, Florence 1951

SEAUER, JAMES EVERETT. *Persecution of the Jew in the Roman Empire (300-438)*. 101 pages. University of Kansas Press, Lawrence 1952 \$2.00

SEWALL, JOHN IVES. *A History of Western Art*. xxxii, 957 pages, 574 figures. Henry Holt and Co., New York 1953 \$7.50

SEWTER, E. R. A., translator. *The Chronographia of Michael Psellus*. 320 pages. Yale University Press, New Haven 1953 \$5.00

SIGERIST, HENRY E. *Civilization and Disease*. 255 pages, 52 figures. Cornell University Press, Ithaca 1953 \$3.75

SMITH, WATSON. *Kiva Mural Decorations at Awatovi and Kawaika-a, with a survey of other wall paintings in the Pueblo Southwest*. xxi, 363 pages, 92 figures, 9 color plates. Peabody Museum, Cambridge 1952 (Papers of the Peabody Museum of American Archaeology and Ethnology, Volume 37) \$7.50

TALBOT RICE, D. *English Art, 871-1100*. xix, 280 pages, 96 plates, 2 maps. Clarendon Press, Oxford 1952 37s. 6d.

WOOLLEY, Sir LEONARD. *A Forgotten Kingdom, being a record of the results obtained from the excavations of two mounds, Atchana and Al Mina, in the Turkish Hatay*. 191 pages, 27 figures, 24 plates. Penguin Books, Baltimore 1953 \$1.95 (Paper-bound \$0.75)

WOOLLEY, Sir LEONARD. *Spadework in Archaeology*. 124 pages, 13 figures, 15 plates. Philosophical Library, New York 1953 \$4.75

YAZDANI, G. *History of the Deccan*. Volume 1, part 8: *Fine Arts*. vii, 68 pages, 61 plates. Oxford University Press, New York 1952 \$3.50

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